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ABSTRACT

The eight studies on reading reported in this publication focus on research in the areas of greatest concern to the general English teacher. The findings and conclusions of systematic empirical investigations as well as descriptive analyses, status studies, and surveys are presented on (1) preparation for teaching reading; (2) variations in reading growth among high school students and factors affecting growth; (3) attitudes of students toward reading; (4) successful reading programs; (5) practices in teaching reading; (6) reading in the content fields; (7) materials for teaching reading; and (8) methods of evaluating growth in reading above grade 3. Authors are M. Agnella Gunn, Robert Karlin, James R. Squire, Margaret J. Early, Constance M. McCullough, Walter J. Moore, Thomas C. Devine, and Paul Diederich. References are provided with each article. (JM)

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What We Know about High School Reading

What Does Research in Reading Reveal?

A Research Bulletin
Prepared by a Committee
of the National Conference
on Research in English

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Newton Center, Massachusetts

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CS002 716

The articles in this bulletin were originally published in issues of *English Journal*, Volume 58, March, April, May, and September, 1969. Specific issues and pages are listed with each article in the table of contents. These articles update a bulletin on research and the teaching of reading published by NCRE about ten years ago. The four original topics have been retained, and four new topics have been added.

The National Conference on Research in English is an organization of one hundred active members qualified to conduct scientific research in English. The purpose of the organization is to stimulate and encourage research in the teaching of English and to publish results of significant investigations and of scientific experimentation. The 1969 president is Walter T. Petty, School of Education, State University of New York at Buffalo (Foster Hall, Library Circle, Buffalo, New York 14214).

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Contents

Introduction M. Agnella Gunn v

What Does Research in Reading Reveal—

Section 1—*About Reading and the Teacher of English?* 1
M. Agnella Gunn
EJ, 58 (March 1969), 368-385.

Section 2—*About Reading and the High School Student?* 19
Robert Karlin
EJ, 58 (March), 386-395.

Section 3—*About Attitudes Toward Reading?* 29
James R. Squire
EJ, 58 (April), 523-533.

Section 4—*About Successful Reading Programs?* 40
Margaret J. Early
EJ, 58 (April), 534-547.

Section 5—*About Practices in Teaching Reading?* 54
Constance M. McCullough
EJ, 58 (May), 688-706.

Section 6—*About Reading in the Content Fields?* 73
Walter J. Moore
EJ, 58 (May), 707-718.

Section 7—*About Materials for Teaching Reading?* 85
Thomas G. Devine
EJ, 58 (September), 847-852.

Section 8—*About Evaluation in Reading?* 91
Paul Diederich
EJ, 58 (September), 853-868.

Introduction

What Research in Reading Says to the Teacher of English

Do you remember this old verse?

THE CENTIPEDE

The centipede was happy quite
Until the frog, one day for fun
Asked, "Pray, which foot comes after which?"
This threw his mind to such a pitch
He lay distracted in the ditch
Considering how to run!

The English teacher, asked to teach the skills involved in a process which he performs almost as naturally as he breathes or runs, does not lie in a ditch, but he is, like the poor centipede, driven nearly to distraction.

He knows well the increased pressures of the throngs of pupils whom he must teach to read if they are to survive in today's competitive society and whom he hopefully expects to hook on books—if not on literature. He recognizes the importance of power in reading. Yet, frustrated in his attempts to teach English to pupils who lack adequate reading power, wishing secretly that someone else would take over responsibility for dealing with the situation, but knowing that a large part, if not the major part of the job rests heavily on his own shoulders, the traditionally prepared English teacher needs help. And he needs it fast. He needs help in closing the crippling gaps in his almost certainly outmoded, even though recent, professional background. He needs help in siphoning off the pertinent results of vast research in reading and in interpreting and applying these results to improve his own understanding and his own teaching. He needs specific concrete answers to his many questions.

During the decade which has elapsed since the publication of our first bulletin, significant social, economic, and educational changes have taken place. Research has generated new areas of scholarly specialization. The content of "English" is being continuously reexamined, redefined, and refocused. Consequently the role of the teacher of English is being reappraised and reshaped, and his preparation for that changing role is therefore being redesigned. At the same time, the high school population has multiplied. Attention—and funds—of the United States Office of Education now include English and reading in their scope, and research in these fields has burgeoned.

The new-model responsibilities of the English teacher have far outrun his oldmodel preparation. Colleges and universities that prepare teachers are in the process of changing curricula to meet changing needs. But retooling the academic and professional machinery is an involved process, seemingly glacial in its speed.

The needs of teachers which prompted the publication of our original bulletin still obtain. Our purpose is the same: to go beyond mere objective reporting to select, interpret, and apply research in reading for the teacher of English. Our four original topics have been retained, the chapters brought up to date and rewritten. Four new chapters have been added.

The content as previously is limited to research in the areas of greatest concern to the "lay" teacher of English, as contrasted with those of the reading specialist. These studies comprise systematic empirical investigations which present quantified findings, analyses of data, and conclusions. Where such "hard-nosed" experimental research is not available, other works are included such as descriptive analyses, status studies, and surveys. The bulletin focuses on the implications of these findings for the classroom teacher of English. It attempts to help him find consistently better answers to his searching questions and is organized around the following interrelated eight topics:

What does research in reading reveal

- —about reading and the teacher of English?
- —about reading and the high school student?
- —about attitudes toward reading?
- —about successful reading programs?
- —about practices in teaching reading?
- —about reading in the content fields?
- —about materials for teaching reading?
- —about evaluation in reading?

The generalist in English is still the key teacher in the country's thousands of secondary school English departments. It is to him that this bulletin is addressed.

M. A. G.

What Does Research in Reading Reveal—

About Reading and the Teacher of English?

M. Agnella Gunn

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What Is "English"?

This question "What is English?" has a familiar sound. But the answers are elusive and continue to shift. The effect is of foremost concern to us here, for the way we define *English* determines the way we prepare teachers of English. Our present dilemma—the need for English teachers to teach reading as well as the skills necessary to read literature, and the lack of preparation for this task—has a curious history. Examining, even cursorily, the sources of this predicament can be revealing and instructive. The following brief look at the academic ancestry of today's English teacher may help clarify how he acquired his many kin and why he does so many different things, as well as illuminate his Topsy-like growth.

In its relatively short history, English in our secondary school has changed its character many times, and more importantly, it continues to change in response to diverse pressures and influences. Among these, one of the most important has been the shifting emphases within college and university departments of English. According to Parker (24), speaking to the Association of Departments of English:

> . . . "English" as a recognized academic subject was not self-begotten, nor did it spring fully armed from the forehead of ancient rhetoric. It is a normal and legitimate child. It is not a foundling. Present-day [teachers] should be more aware, therefore, of its once proud parents, both of whom are still very much alive—though living apart. . . .
>
> English [as a discipline in America] was born about 100 years ago. Its mother, the eldest daughter of Rhetoric, was Oratory— or what we now prefer to call public speaking or, simply, speech. Its father was Philology or what we now call linguistics. Their marriage, as I have suggested, was shortlived, and English is therefore the child of a broken home. This unhappy fact accounts, perhaps, for its early feeling of independence and its later bitterness toward both parents. I date the break with the mother, however, not from the disgraceful affair she had with Elocution, but rather from the founding of the Speech Association of America in 1914, . . . and the developing hostility of literary scholars to non-prescriptive grammar, new

> terminology, and the rigors of language study. Splinter groups form when their founders feel their interests neglected, and English teachers, absorbed in what they considered more important business, were indeed neglecting speech by 1914 and losing all vital concern with linguistics by 1924. . . .
>
> . . .the teaching of English [as distinct from English studies] is a Johnny-come-lately . . . still wrestling strenuously and confusedly with the initial problems that mass education has suddenly and greatly aggravated. . . . [We] are still fumbling and faddish and lacking well-defined goals. . . .
>
> "English" in the United States very recently became an accepted academic subject, grew to maturity, over-reached itself, and planted deeply the seeds of most of its subsequent troubles as an academic discipline. Early chairmen and early professors of English *literature* were willing if not eager to increase the prestige of their subject and the numbers of their students and course offerings by embracing, not only *linguistics* (including English grammar and the history of the language and even, whenever possible, comparative philology), but also *rhetoric*, which normally included, of course, oratory, elocution, and all forms of written composition. . . . let us remind ourselves of the full scope of the aggressiveness (some would say acquisitiveness) exhibited by the department of "English." They were later to embrace, just as greedily, journalism, business writing, creative writing, writing for engineers, playwriting, drama and theater, and American literature, and were eventually to be offering courses in contemporary literature, comparative literature, the Bible and world classics in translation, American civilization, the humanities, and "English for foreigners." In sum, English departments became the catchall for the work of teachers of extremely diverse interests and training, united theoretically but not actually by the common use of the mother tongue. Disintegration was therefore inevitable. . . .
>
> Thanks first to its academic origins, and then to the spirit of competition and aggressiveness engendered by departmentalization, *"English" has never really defined itself as a discipline. . . .*

As might be expected, English departments in the secondary schools were early influenced by offerings in the academic institutions. They also reflected the interests and competencies of their teachers, who taught, in diluted form, what they themselves had been taught. Ultimately English became tradition-bound, remote from the realities of the secondary school, and faintly redolent of mothballs. Gradually reaction set in. Other influences, immediate, ephemeral, and lasting, were at work on the curricula. Tremendously increasing enrollments brought increasing diversity among pupils, and schools reeled under the impact. In an attempt to serve better the wide range of student needs and in response to socio-cultural pressures, professional organizations and committees began to exert strong leadership. Only a few of the major ones are included here.

As recently as the late fifties, the prestigious Curriculum Commission of the National Council of Teachers of English, long at work under Director Dora V. Smith, published *The English Language Arts in the Secondary School*, the third volume of their five-volume curriculum series (7). This publication offered assistance in designing the English program to develop competencies in reading, writing, speaking, and listening and to meet youth's needs through literature. It helped to narrow the scope of English instruction and to sharpen its focus. Implications for the preparation of teachers were clear and began to be put into effect.

Emphasis in college entrance examinations had changed from specific content to be covered to mental processes and skills to be developed. (But *Silas* still persists even today!) The authors of Volume III say in part (7):

> Although the secondary schools of this country have never served college-bound pupils exclusively, the success at college of their students who go on to further training has always been a major element in judgments of the quality of their instruction. How to care adequately for those preparing for college, including the so-called "gifted," and at the same time meet the needs of those seeking a terminal education in high school is a problem confronting curriculum makers. An equally perplexing task is how to prepare students for college and at the same time for life outside an academic environment. . . . (p. 439)

Later they add:

> The trend in schools with a small staff and limited enrollment was for many years to let college entrance requirements dominate the high school program. The last two or three decades have seen significant efforts to consider the preparation of all students, whether bound for college or not, for the demands of the world outside the school. Many schools have made changes in this direction. Others have been untouched by the movement. . . . (p. 440)

The Committee for Volume III gave forceful recognition to reading needs and the implied competence of the teacher in meeting those needs. Of special interest is Chapter 6, "Developing Competence in Reading"(7). The five parts of this section discuss:

> Reading—An All-School Responsibility
>
> Major Strands of the Developmental Program in Reading
>
> The Special Province of the English Teacher: Developing the Essential Skills for Reading Literature
>
> Remedial Reading in the Classroom
>
> Identification of Individuals Needing Clinical Help

The importance of developing skills for literature is stressed:

> Maturity in appreciation of literature presupposes the development of skills essential to reading the various literary types—novel, short story, poetry, drama, biography, and essay or article. In general, these skills involve specific application to literature of the basic silent reading skills with the additional consideration of difficulties posed by the different literary types. Again, the teacher's essential task is to train students to think with various kinds of literary material according to the purpose in reading. Of course, these skills, like any reading skills, will develop gradually according to the reader's intelligence, interest, and general maturity. (p. 179)

This general statement is followed by specific breakdown and discussion of sub-skills under each of the six literary types.

The publication of the NCTE Curriculum Series was a part of the revolution of the fifties. Across the country, English teachers began to form committees, to reassess their goals, to revise their curricula, and to recognize their need to continue and extend their own preparation. Under the influence of the series, new, flexible, tentative Guides in English Language Arts began to appear. A wave of much needed, long overdue curriculum reform, almost tidal in proportion, was set in motion.

In actual practice in many schools, however, emphasis came to be focused on skills to the neglect of substantive content. Inevitably, further changes became necessary. New scholarly research, particularly in language, communication theory, and the learning process brought about mounting concern and discontent.

Strong new influences were set in motion. In 1959 the College Entrance Examination Board appointed the Commission on English, with the broadly stated purpose of improving the teaching of English in America's schools and colleges. Their influential report, *Freedom and Discipline in English*, was published in 1965 after five years of study and experiment, including twenty summer institutes in various parts of the country, which brought together school and college English teachers. Theirs is another answer to the question, "What is English?" (5).

> It [the Commission] sought to encourage and facilitate a gradual nationwide improvement in curriculum, teacher training, and methods of classroom instruction. Its stated goal was to propose standards of achievement for college preparatory students and to suggest ways of meeting them. The Commission's concern with college preparatory courses in secondary schools may seem to have been narrow . . . but better teaching of able students affects the whole school . . . . In making this appointment [of the Commission on English] the Board reflected widespread concern that secondary school English, through a long process of diffusion, of trying to meet many needs not met elsewhere in the school, was in danger of losing its identity altogether. Someone's wry comment that English teaching was not a profession but a predicament seemed too close to the truth for comfort.
>
> . . . In the later elementary years . . . the group [reading, spelling, word study, penmanship, composition, oral work] is gradually compressed into a fifth of the school day and is merged into a single subject called "English." The compression has merit because it brings together several activities that have much in common, but it also has defects. In the first place, it makes separate what is naturally a part of other subjects. . . . In the second place, exactly because the composite called "English," as it emerges from the elementary school, bears on all studies, it invites a further accumulation of responsibilities by the English teacher. At one pole, the study of logic may be added, though it is surely as much the province of geometry and physics as of English; at the other, social conduct (how to use the telephone, how to write letters of invitation, how to face teen-age problems) may claim time and attention. Whatever may be said about the absolute worth of some of these matters, it is clear that inclusiveness is not a very satisfactory principle of organization for the curriculum in English.
>
> What is the school and college subject called "English"? . . . The answer rests on the unstartling assumption that language, primarily the English language, constitutes the core of the subject; and on the further and equally unstartling assumption that the study and use of the English language is the proper content of the English curriculum. . . .
>
> . . . The English curriculum in the average secondary school today is an unhappy combination of old matter unrenewed and new matter that rarely rises above the level of passing concerns. *Macbeth* vies with the writing of thank-you notes for time in the curriculum, and lessons on telephoning with instruction in the processes of argument. (pp. 1-3).*

With specific reference to the building of the curriculum, the Commission states (5), "The catchall character of many English programs results in confusion of purpose and diffusion of responsibilities, both inimical to good instruction"; and in its recommendations it sought to achieve "that clarity of definition [which] is of primary importance." Especially pertinent to this article is their recommendation: "That the scope of the English program be defined as the study of language, literature, and composition, written and oral, and that matters not clearly related to such study be excluded from it."

This CEEB report was a part of the curricular reform that began in the early 1950s and has swept over the schools, effecting dramatic changes in the classrooms. Its influence was strong and pervasive, and the triadic curriculum (language, literature, and composition) took hold. One of its effects was decreasing emphasis on teaching the supporting skills, including reading.

These influences have been salutary but, fortunately, not final. Perhaps, as the CEEB report says (5):

> Restlessness about the quality of English instruction has existed among English teachers for decades. It may be true that thoughtful English teachers have always been and always will be dissatisfied with their performance, because English, unlike other subjects, occupies a central position in the instructional program of the country's schools. . . . (p. vii)*

Ferment, leaven, and new ideas are still at work producing needed readjustments in definition, and consequent modifications in the preparation of English teachers. Dissatisfaction and debate over the curriculum guides of the '60s indicate that changes are again imminent. Teachers are becoming increasingly uneasy at the practical effects of the triadic organization of English, which in operation in the schools ignored individual differences and put disproportionate effort in terms of class hours on literature, written composition, and language, with little, or at worst almost none, on the skills on which competence in these very areas is based.

One recent far-reaching influence on definition, with implications for the preparation of teachers of English, is the National Defense Education Act. Meckel (21) says:

> NDEA legislation has turned the attention of the country to the most basic problem of democratic education: the improvement of classroom experiences in essential academic subjects of those pupils who have been the most difficult to teach. The availability of federal funds for this purpose is therefore the greatest positive factor in teacher education today and the greatest educational achievement in the history of the American people. As long as NDEA provided assistance only to mathematics, science, and foreign languages, it mainly benefitted the college preparatory students in our schools. With the addition of English . . . assistance became extended to the [subject] required of all pupils throughout their entire public school experience. Provisions for reading . . . make the act a piece of legislation preeminently concerned with teaching and teaching methods . . . .

One result of this federal legislation is that it is apparently going to force us to reconsider the definition of our subject. During the last few years, concurrent with the efforts to improve the high school English curriculum of university preparatory students, attempts have been made to formulate a new definition of public school English instruction. Considerable consensus developed around the definition of English as instruction in language, literature, and composition. This trivium, it has been argued, constitutes what is *essential* in English. Federal legislation appears to be forcing us toward a new orientation. In Washington the trivium seems to have been recognized as not comprehensive enough to serve as a definition for federal legislation that seeks to improve the English instruction not only of the more capable students in our schools, but of those whose culture and environment have not provided educational opportunity, those who lack reading proficiency . . . those for whom the learning of English skills has been and still is a seriously frustrating and unpleasant process. Certainly the trivium tends not to direct our thinking toward the oral aspects of language, which linguists would see as essential in our approach to English usage, in teaching the culturally deprived, in teaching reading, or in instructing those for whom English is a second language. The trivium has encouraged the idea, especially among those who are inclined to be congenial to it, that the teaching of reading—at least at lower levels of skill—is not really English teaching at all. It is, of course, possible to put forward strong arguments for this point of view. If we hold it, however, the consequences for American education are very great. Not only the nature of English is at stake in the issue but the very future of public education.

So far this paper has been primarily concerned with the continuously changing definition of "English" and the growing importance and recognition of the reading component. In summary, may I stress the point that these aspects should be perceived within the always temporary framework of the total program, the emerging definition of which may be tentatively stated as: "English" = language, literature, composition, AND the supporting skills of reading, writing, speaking, and listening. It begins to look now as if we are about to have another wedding in this English family and bring together in productive association these two important main branches: the cognitive and affective aspects of content, and the supporting competencies or skills.

What Is the Reading Component of "English"?

What is the reading component of "English"? What are the aspects of reading for which the English teacher has responsibility? Emphasis throughout this paper on the skills involved in interpreting written symbols and on those required for reading with depth and insight should not obscure the ultimate purpose for which these skills are taught —use in the cognitive and affective processes of productive thinking. The science and art of teaching English come together here: laying a sound foundation and building the superstructure which makes possible power and delight in literature. To lose sight of these main goals would be something like getting stuck with finger exercises in playing the guitar instead of making real music. Or to mix in another metaphor, like making white sauce in learning to cook. You're not a cook unless you can do it. But also you're not a cook if that's all you can do. The name of the game here is *use.*

What skills comprise the reading component? Definition is again in order. Research has not yet isolated all the skills involved in the complex act of reading, but certain ones are known to be basic. If the secondary school could presume, optimistically, that pupils entering junior high school had mastered the primary decoding skills, and could use context and other comprehension skills to unlock meaning, the reading component in the secondary school would still have to include provision for developing more sophisticated vocabulary and for further refinement of the skills needed for reading factual material and for reading literature. Also, because many students sit in a secondary school but perform at an elementary school level, the reading component for some time may need to include the more primary skills.

Any listing of skills included in the reading component of English is to some degree arbitrary, but the following one by Gunn and others (15) is representative:

> *VOCABULARY SKILLS*—ability: to use context clues; to use phonetic and structural analysis, including syllabication; to use the glossary and the dictionary; to utilize wide related reading to enrich and extend word meaning
>
> *COMPREHENSION SKILLS*—ability: to find and to understand details and main ideas; to relate supporting details to main ideas; to see and understand the sequence of ideas or events
>
> *STUDY SKILLS FOR WORK-TYPE READING*—ability: to define a specific purpose for reading; to adjust the method of reading to one's purpose and to the nature of the material; to locate information; to use information; to remember what is read
>
> *CREATIVE-READING SKILLS*—skills of a higher order than literal comprehension—ability: to draw conclusions and to make inferences; to anticipate events and to predict outcomes; to use ideas gained through reading in a new situation; to se-

lect and to use several sources of information in solving a problem; to judge the validity of information and to identify the writer's purpose; to distinguish between the relevant and the irrelevant, or the important and the unimportant; to distinguish between cause and effect; to distinguish between fact and opinion

LITERATURE – SKILLS AND APPRECIATIONS: understanding and appreciating—how literature can enrich personal living through insights into the ways others feel, think, and live;

how literature can develop aesthetic values;

how literary situations can be used to understand oneself and one's life;

how an author develops . . . plot . . . ; how [he] reveals character; how he reveals time and setting . . . ; how setting influences plot and character;

how characteristics of different literary forms affect the writing and reading of literature; how the reading of literature is enriched by visualizing characters and setting; how [it] is enriched by "hearing" characters' conversation and voices;

the [effects] of telling a story from different points of view; the use of flashbacks and other time patterns; the use and importance of foreshadowing clues; the use of descriptive and effective expressions; the use of symbols [and] figures of speech; the use of humor, satire, irony;

the mood and how the poet creates it; the effects of rhyme and rhythm in poetry; types of poetic form; the effectiveness of word sounds in poetry;

the enhancement of literature through oral reading; the enjoyment of literature through appreciative listening.**

Each skill in any such a listing is in reality a little cluster of sub-skills which in practice may need further breakdown to meet the wide range of student needs.

Attempts to handle the reading needs of the teeming, departmentalized secondary schools have not been phenomenally successful. After reviewing research in reading in 1963, Townsend (31) summarized the inhibiting effects of certain organizational patterns:

> It seems probable that the developmental sequence of a program in study skills is interrupted by the junior and senior high school practice of departmental work. Since the position of the whole reading program in the secondary years is not by any means settled, school practice varies a great deal. One school may make reading an adjunct of English and limit study skills to literary materials. If this school then expects the teacher of the content subjects to instruct in the requirements as they bear on reading, it may be courting failure. There is a lack of experience and training in the teaching of reading to contend with, and the current stress on subject matter specialization may produce teachers even less conversant with reading problems.

More recently Early (11) voiced a similar idea:

> Surely the reading program stands to suffer from increasing specialization if the experience of the junior high school is duplicated. Here we have seen departmentalization make every teacher a subject specialist (in intent, if not in fact) and none a teacher of reading. We have tried to patch up the situation by creating extra reading classes that isolate skills instruction from the learning of subject matter, or we have tried, without notable success, to train subject specialists in methods of teaching reading.

Certainly, preparing teachers to teach any listing of discrete skills does not indicate the sum of preparation for teaching the reading component of English. More important even than preparation for teaching the skills, is preparation for developing in students the abilities, habits, and attitudes which lead toward real literacy. These include the five discussed by Squire (27) in "Literacy and Literature."

1. *Competence in advanced reading skill*—Competence in comprehending the meaning of difficult passages, skill basic to the development of literary appreciation.

2. *Competence in special skills of literary analysis*—Skill in understanding the structure, the tone, the pacing, the imagery—the unity of form and content; skill in perceiving what John Ciardi calls the "how" of a selection as distinct from the "what"—skill in perceiving the interplay of the human insight and the poetic technicalities—"a matter not of WHAT DOES IT MEAN, for no one can say entirely what a good poem means, but of HOW DOES IT MEAN, a process one can come much closer to discussing."

3. *Some sense of literary tradition*—A beginner's grasp of legend, folklore, and the ongoing literary tradition—understood less as a body of information to be assimilated than as a background for interpreting allusion. Since such understanding is acquired only slowly, schools might direct less attention to implanting such information directly and more to helping young readers understand the ways in which allusions convey meaning.

4. *Favorable habits in approaching literary interpretation* — Attitudes and approaches which contribute to sound interpretation. Such personal characteristics as:

   Willingness to suspend judgment in examining a selection and to search for all available evidence.
   Flexibility in interpreting meanings—to modify interpretation as new evidence is discovered.
   Response to the emotional meanings of a selection as well as to the intellectual meanings.
   Desire to look for multiple meanings, recognizing that the richness of possible interpretation is often a sign of worth.

   The way a reader approaches a literary selection is as important as his skill in reading and analyzing. The habits needed are those which open the possibilities of literary response, not those that inhibit such response.

5. *Motivation for continued reading of literature*—Without desire, a highly educated, intelligent reader does not apply his skill. Too many of our high school and college graduates fail to turn to books even though they are capable of such reading. As teachers, let us realize that permanent interests and permanent attitudes toward readings are as important as immediate understandings.

If we can achieve these five goals, we shall go a long way toward achieving real literacy in literature, and the evidence of literacy will be far more apparent than it is today.

The reading component of "English," as is fortunately coming to be realized, includes not only the basic ability to read, but also the ability to read increasingly difficult factual material, as well as the ability to read literature with depth and insight. We in secondary school English can ignore any one of these three facets only at the peril of our responsibility to society.

What Is the Preparation for Teaching the Reading Component of "English"?

College experience that permits the preparation of teachers to remain out of touch with the realities of our own culture in general, and with the realities of the secondary school in particular, is indeed culpable. The emerging redefinition of "English" indicates not merely a semantic change, but a new philosophic point of view and a practical recognition of responsibility.

Concern about preparation of English teachers is manifest outside of the profession. The community concept of English is a case in point. Carlsen (4), after completing one hundred observations of instruction in English from Grade 2 to Grade 12 with approximately ten observations at each grade level, concluded that communities see English as a three-pronged affair, namely, that English is the teaching of reading skills, that it is the subject in which students should learn to use language without "making a fool of oneself," and that it is the content area in which students are introduced to the "mysteries" of literature.

He recommended that professional groups in English look realistically at the actual situation "in the trenches" of the public school.

Mersand's (22) research also illustrates this public concern. He reported the results of a study of attitude toward English teaching. The consensus among four hundred respondents (educators, business executives, heads of state departments of education, and editors) was that in preparing English teachers greater emphasis be put on the development of reading skills and tastes.

In addition, such seemingly remote trends as changes in administrative organization of the middle school have a bearing on the English teacher's preparation. According to NCTE *Council-Grams* (23):

> The great ferment in school reorganization has, indirectly, specific implications for teachers of English with particular focus on the junior high school. . . . Behind the creation of the middle school are the needs to create new educational programs and new curricula, in which the key teacher is the teacher of English. (p. 40)

One effect of the new middle school is the stepped-up need for junior high school English teachers to include in their professional preparation work in the teaching of reading and in literature for adolescent youngsters.

Changes in our culture, among them changes in the high school population, have forced reassessment of student needs, which in turn have effected reassessment of teacher preparation to meet these realities. Because Karlin deals elsewhere in this bulletin with the range of students' needs, I will use here as illustrations only two studies on two high school levels. Letton (18) studied the nature of the process involved in reading poetry. Her subjects were twenty-two ninth grade students whose IQ scores were above 102. From their interpretive responses in reading poetry, Letton concluded that observable differences between good readers and poor readers include superiority not only in grasping both the literal meaning and the broader meanings inherent in a poem, but also in responding to what they read and in associating the newly acquired ideas with their own previous experience. The higher-level readers were more familiar with poems and poets; they had more positive attitudes toward poetry and had enjoyed more favorable experiences with it.

Rogers' (25) study of the range of reading abilities which English teachers must be prepared to meet is reported by Strang and Rogers (29). The study analyzed the interpretive responses of three classes of eleventh grade pupils of low, average, and high ability in reading a short story. Two questionnaires, as well as introspective and retrospective techniques, were used in interviewing seventy students. Analysis of data revealed significant differences between the high and lower groups in their grasp of the literal meaning of the story. The report continues:

> . . . those on a lower level were less aware of various story elements, and more often

> failed to recognize the main events in the story. They reported more sensory impressions while reading, and showed significantly less ability to understand symbolism, metaphors, similes, and words in context. They also had more difficulty in recognizing the significance of the title and were less aware of clues to setting. . . . They were less able to sense the mood of the story, and to understand the author's viewpoint. They missed some finer points of characterization.
>
> In basic reading skills such as grasping the purpose of the paragraph, identifying the main incidents, and understanding the transitions of the narrative, the low-level readers were also less competent than the higher group. They had more difficulty in remembering factual information, and were less likely to seek meanings for ideas and words that they had misunderstood. . . . But they did remember the attitudes of the characters after a lapse of ten days.
>
> The poor readers also had a tendency to state personal opinions that were often irrelevant to any real appraisal of the story. Most of them missed the theme
>
> . . . .
>
> . . . A comparison between the performance of the low- and high-level readers indicates many specific reading skills in which the majority of eleventh grade students need more practice and instruction.

Mounting evidence of the range of reading ability calls increasing attention to the importance of preparing English teachers to know and to select reading materials of appropriate ideational, verbal, and mechanical complexity. Aukerman's (1) study of readability throws light on this vast problem. He says in part:

> . . . it is entirely proper for anthologies intended for gifted high school seniors and college freshmen to be more difficult verbally and more complex mechanically. Conversely, anthologies intended for the junior high school student or for the "non-academic" senior high school student should be at a lower incidence of both verbal and mechanical complexity.
>
> The readability charts reveal that there are few, if any, literature anthologies that can be read at the "Independent level" by any secondary school students in the bottom 25 per cent . . . inasmuch as such students are reading at fifth grade and below. Hence, thousands are what I term "functional non-readers of literature," unable to read the anthologies being used in their schools.
>
> . . . .
>
> Most certainly, there are 3,000,000 or more young people in our secondary schools who cannot read the literature books that are given to them. This is not the fault of the books, for they are beautiful creations, assembled by competent anthologists, carefully-edited, well-illustrated. For many of those students, a book of lesser complexity could be handled; thus it impinges upon the English departments to adopt a multi-text approach and to know the independent literature reading level of each student. . . .
>
> It is probable that "literature" anthologies designed specifically for "functional non-readers of literature" are necessary to provide exposure to the values of literature in its many forms.

Is not competence in instruction believed to be predicated on the teacher's knowledge of content, methods, and process, as well as on other factors? What is the evidence concerning such knowledge? In 1961 the NCTE Committee on National Interest and the Teaching of English (8) summarized as follows the status of teacher preparation:

> More than 50 per cent of the colleges require [students majoring in secondary English] to complete eighteen to twenty-four semester hours in literature; more than two-thirds of the colleges require courses in English literature, American literature, and Shakespeare; only one-third require work in world literature. Only one-fifth . . . specify the need for a course in contemporary literature or in

> literary criticism or critical analysis. Few institutions provide for the study of literature written for adolescents. (p. 75)

In another study McGinnis (20) surveyed the preparation of teachers and their insight into reading needs of their pupils. She analyzed responses from 570 high school teachers in Michigan to a questionnaire concerning: the percentage of their students possessing reading skills essential for required work; expectations for assuming this responsibility for teaching reading; and undergraduate training for this purpose. In addition, she analyzed replies of 1,029 college freshmen who had recently graduated from high school to sixteen questions concerning their high school reading needs and the reading training they had received.

The teachers estimated that one-third of their students did not read well enough to do the reading expected in high school classes. While 82 per cent of the teachers said that they had learned in college that reading skills could be improved, less than 10 per cent had learned to teach reading. Sixty-one per cent of the college freshmen reported that their high school teachers had not taught them how to improve their reading skills.

Obvious inferences may be drawn from these data concerning the adequacy of preparation for the English teacher's role as a teacher of reading and as a teacher of the reading of literature. Further evidence of what the preparing institutions have been doing—or not doing—about the teaching of reading was reported by Stratemeyer (30). In part, she used data secured by the Harvard Carnegie Reading Study on the preparation of prospective teachers in 530 colleges and universities distributed over fifty states and the District of Columbia. These data show that college courses tend to neglect the teaching of reading in the secondary schools and that only rarely do prospective high school teachers receive any kind of preparation in teaching reading.

A significant factor not to be lost sight of in discussing the preparation of English teachers is the influence of the instructor of the college course, Methods of Teaching English. His emphasis—or lack of it—on reading may well be a reflection of his own training. Evans and Cardone (14) studied the backgrounds of 569 instructors in the 402 institutions which offered separate courses in English methods. Of these instructors only 5 per cent had taken some course work in Literature for Adolescents and only 8 per cent had taken some course work in the Teaching of Reading. Is it surprising then to discover that the key findings of the study include the statement, "Little stress is placed on the teaching of reading"? Might it not also be possible that the findings of this study have a causal relation to the discovery reported by Squire (26) in his discussion of preparation for teaching the "New English"?

> But think . . . of those who for twenty-five years have proclaimed that our program rests upon the four language arts of reading, writing, speaking, and listening. [The NCTE study of schools programs revealed that listening and speaking] are virtually ignored in the overwhelming majority of secondary schools, and that during the last six years of our high school programs, reading itself receives precious little attention. Indeed, it is difficult to name a substantial number of high school teachers of English who are even willing to admit verbally that they share *any* responsibility for the teaching of reading. . . . the Council's recently concluded study of the continuing education of teachers [revealed that] 90 per cent of all secondary teachers [say] that they are not well prepared to teach reading. . . .

Presumably teachers of reading should themselves be readers. Although one would be on thin ice in drawing any inferences about high school English teachers from the following study, it is interesting and quite possibly it might be instructive to note El-Hagrasy's (12) comparison of the teachers' reading habits and library backgrounds and the same abilities of their sixth grade students. He reported that when a teacher's reading habits and library backgrounds were found to be significantly low, then the reading and library skills of his class were significantly low, and vice versa.

Preparation in the "what," or in the substantive areas must, of course, have highest priority. But preparation in the "how," or in the science and art of teaching, must also have high priority. Hoetker (16) presents supportive evidence of what can happen when teachers are inadequately prepared. He studied the questioning behavior of selected ninth grade teachers of English and found a question asked every 11.8 seconds in classes of average pupils, and every 5.6 seconds in classes of slow pupils. He adds: "When oral reading was not taking place, literature was taught by asking questions at five or more questions a minute."

Harbingers of change had begun to appear in the impressive academic and professional leadership taking cognizance of the reading problem in the secondary school and recommending appropriate changes in the preparation of teachers. Conant (10), in his study of the education of teachers for the secondary schools of the United States, recommended that all English teachers should be prepared to teach reading skills, and should be familiar with literature for adolescents. Growing concern among practicing teachers may be inferred from Burton's (3) prediction in the Golden Anniversary Program of the NCTE, which featured forecasts of the status of English in 2010, the year of the one hundredth anniversary of the Council. He based his statements on the interest expressed in manuscripts submitted to the *English Journal* during the preceding five years, and gave as two of his predictions: greater responsibility for the teaching of reading; and recognition in the literature program of books written expressly for adolescents.

Meanwhile, a special committee of the Curriculum Commission of the NCTE, under the chairmanship of Burton, was at work on a *Check List* reflecting modern research and scholarship in the teaching of English, as well as tested practice, designed to aid faculties in examining their English programs. The criteria set forth in the *Check List* (2) are of signal importance here in their implicit demand for English teachers whose preparation in content and in methodology enables them to meet these criteria. The main headings of the sections on Literature and Reading are as follows:

Check List for Evaluating the English Program in the Junior and Senior High School

LITERATURE

1. Is literature study planned so as to give balanced attention to: (a) the student's development through literature —his greater insight into human experience . . . ?

2. In each of the grades do the students study intensively several major works appropriate for the grade?

3. Are the selections for group study in each grade chosen carefully in terms of their enduring qualities as literature and their appropriateness to student interest and abilities?

4. Is the anthology-textbook, if one is used, regarded as a resource rather than as a course of study?

5. Are organizational patterns of the literature program in each grade determined in terms of the age levels and ability levels of classes?

6. Is extensive individual reading a definitely planned part of the literature program?

7. Does the literature program reflect a balance in approaches to literature and in classroom procedures, avoiding such practices as overemphasis on enforced memorizing of verse, isolated defining of literary terms, strained or forced correlating of literature with history or other disciplines, overemphasis on paraphrasing or on seeking "morals"?

READING

1. Is instruction in reading and study skills an integral part of the curriculum in all subjects?

2. Does the program give attention to improvement of vocabulary and of techniques of word recognition?

3. Does the program aid students in improving the various skills necessary for comprehension in reading . . . ?

4. Is the school library adequate to support the reading program?

5. Is there available for each classroom an abundant supply of reading materials of interest to students and appropriate for a wide range of reading achievement levels?

As might be expected, interest in the preservice, inservice, and continuing education of teachers of English is assuming impressive proportions. One of the most important of the recent influences is the 1964 report of the NCTE Committee on National Interest and the Continuing Education of Teachers (9). This study is based on the replies to 10,000 questionnaires sent to junior and senior high school principals who gave them to three "representative" English teachers, each teaching at different grade levels. Among the questions and responses, the following are most pertinent to this paper:

How do the teachers view their preparation?

Ninety per cent do not feel well prepared to teach reading.

Fifty per cent do not feel well prepared to teach literature.

What are the teachers interested in studying?

The courses rated as of highest interest and value for further work were: study of methods and curriculum, 68 per cent; literature for adolescents, 57 per cent; teaching of reading, 56 per cent; and literary criticism, 49 per cent.

The report continues, "To the extent that their own evaluation of preparation may be accepted as an adequate index of need, the data point to the overwhelming concern of such teachers with their lack of competence in teaching . . . reading. . . ." (p. 26)

The Committee made major recommendations for action by national, state, and local authorities. Of relevance here is the one recommending the development of institutes and workshops on the specialized methods required for teaching English. On the basis of the profile of continuing education presented in their report, the chairmen say:

> . . . secondary teachers of English . . . feel less secure in teaching reading than in any other aspect of the English program. Indeed some deficiency in this area was admitted by almost all secondary teachers, [who] will be responsible for maintaining and extending the basic skills. Employing specialized reading teachers in the secondary schools, a common practice in many states for offering a single intensive course in reading, is not likely to reduce to any degree the continuing responsibility of the teacher of English who must supervise each student's development in reading throughout his years in school. (p. 170)

The recent statements regarding preparation for teaching English are specific about the inclusion of reading skills. Among the most impressive and responsible is the one from the Illinois State-wide Curriculum Center for Preparation of Secondary-School Teachers of English (ISCPET) (17). This study group included representatives drawn from the departments of English and Education of twenty-two Illinois universities and colleges. In the process of conducting a five-year study of ways of improving teacher education, they published (1965) a working guide, "Qualifications of Secondary School Teachers of English: A Preliminary Statement." The qualification dealing with reading lists three levels of competence:

Minimal	*Good*	*Superior*
Some knowledge of corrective and developmental reading techniques.	Moderate knowledge of corrective and remedial reading techniques.	A relatively thorough knowledge of corrective and developmental reading techniques.

By 1968, the impact of these notable earlier studies was producing results such as the English Teacher Preparation Study, *Guidelines for English Teacher Preparation* (13). These Guidelines are in debt to many studies, including the recommendations on the preparation of teachers in *The Education of Teachers of English for American Schools and Colleges* (NCTE, 1963); *Freedom and Discipline in English* (Commission on English, CEEB, 1965), and numerous studies of the NCTE Committee on the Preparation and Certification of Teachers of English. In discussing the nature and purpose of the study, the committee says:

> The Guidelines are intended to suggest desirable competencies for teachers of English . . . and while it [English] encompasses many areas of study and practice, English is herein conceived of as a unified discipline . . . . Although English studies in American colleges and universities have emphasized chiefly the reading and appreciation of literature, preparation of the . . . secondary school teacher of English must include work in . . . reading and appreciation of literature, both to extend the teacher's own background and to prepare him to meet the full range of his obligations as a teacher of English.

Guidelines V and VI have particular bearing on the preparation of the English teacher for his role as a teacher of reading.

GUIDELINE V

> The teacher of English at any level should have an understanding of the relationship of adolescent development to the teaching of English.
>
> He should in a formal way have studied human behavior, with emphasis on the age level at which he plans to teach, and should explore relevant research on . . . adolescent development for its possible implications for the curriculum in English.
>
> . . . .
>
> He should be aware of the growing knowledge about the specific relationships between control of spoken language (sentence patterns, vocabulary, dialect) and success in reading.
>
> He should recognize aspects of child development that will help him select literature which adolescents are likely to understand and enjoy.
>
> . . . .
>
> He should be familiar with theories of reading and be able to apply appropriate methods to improve the reading abilities of students at various levels of achievement and with various rates of progress.
>
> . . . .
>
> The secondary school teacher of English should have an understanding of developmental reading, par-

> ticularly at the junior and senior high school levels, and be able to utilize that understanding in his teaching.
>
> GUIDELINE VI
>
> The teacher of English at any level should have studied methods of teaching English and have had supervised teaching.
>
> . . . .
>
> He should have learned how to correlate the contents and skills of listening, speaking, reading, and writing with one another and with other subjects in the curriculum.

High School English Instruction Today, a most recent NCTE study reported by Squire and Applebee (28) is restricted to "outstanding English departments." This study just may provide the jolt still necessary to modernize the preparation of English teachers. The committee made a study in depth of 116 cooperating schools, among them those which year after year graduated students receiving NCTE Achievement Awards in English; an equal number of schools whose English programs were highly regarded; and forty-two additional schools, including independent, Catholic, and comprehensive high schools engaged in experimental English programs.

To assess and report on the English programs, this study used classroom observations, individual interviews, group meetings with teachers and students, and specially designed questionnaires and check lists. The investigators advanced twelve hypotheses which they believed to be characteristic of strong secondary English programs. The following one assumes certain preparation and competence in teaching reading:

> The schools will provide comprehensive instruction in the skills of reading for all pupils, and, in addition, special instruction for pupils whose needs and abilities warrant more individualized procedures. (p. 240)

In discussing content emphasized in classroom teaching, they say (28):

> Analysis of classroom reports led to a number of significant deductions, probably none so revealing as the tendency to emphasize certain components of English almost to the exclusion of others. According to the reports on 32,580 minutes of classroom observation, the teaching of literature is emphasized in the high school 52.2 per cent of the time, more than all other aspects of English combined. In contrast, only 13.5 per cent is devoted to language and 15.7 per cent to composition, while other aspects of English [speech, reading, mass media, etc.] receive even less attention. (pp. 40-41)

Obviously these grim facts reveal that the preceding hypothesis about instruction and competence was not supported by the evidence from even these "outstanding" schools.

Grommon (6), in *The Education of Teachers of English*, Vol. V of the NCTE Curriculum Series, concentrates on the preservice preparation of the English teacher. In making his recommendations, he draws heavily on many sources: (a) *The National Interest and the Teaching of English;* (b) the comprehensive study of the literature requirements listed in the catalogues of forty-six institutions of higher education diversified geographically and as to type (i.e., liberal arts, teachers college, university); (c) personal letters from faculty members in various representative institutions; (d) unpublished surveys; and (e) professional literature.

A recommendation relevant here is that preparation, in addition to including attention to the teaching of reading, also includes methods of teaching literature for adolescents.

He describes as follows the recommended course in Literature for Adolescents (required by 16 per cent of the colleges reporting):

> The prospective teacher should be given the opportunity to become acquainted with literary works of the past and present appropriate to the secondary school. The course should prepare the teacher to meet whatever the specific needs of his future pupils may be. He should learn the sources of information about the growing body of literature for youth and the criteria for analyzing and selecting books appropriate to the wide range of individual interests and capacities of the adolescent reader. . . . (pp. 282-283)

Surely, preparing to teach literature implies developing the ability to direct both the independent, extensive reading of pupils, as well as their intensive study of a literary selection.

The authors of the report on high school English instruction summarize their findings relevant to our topic (28) as follows:

> . . . most schools are failing to provide any integrated or sequential training in reading . . . for classes at any level—remedial, average, or advanced.
>
> Reading is an essential part of the English program; it involves not only fundamental skills but also important attitudes toward personal reading, the selection of reading material, and, in its broadest sense, the program in literature. In the schools visited, the teaching of reading was viewed by the majority of English teachers as something foreign. . . . Few teachers seemed to relate [teaching reading] to the teaching of a sensitive, accurate response to written communication, literary or otherwise. . . . (p. 152)
>
> . . . as high schools are now organized, a strong developmental reading program for all students seems likely to come only as English teachers in general see the differences between reading and the *teaching* of reading, between literature and the *reading* of literature. It is not likely to come, for instance, until the high school teacher of English is more aware than he is at present that in teaching *Julius Caesar* he has an obligation to prepare students to read other Shakespearean plays as well. What special skills are needed to read a sonnet? To analyze an essay? To comprehend a metaphor? Questions such as these deserve much greater attention than they currently receive.
>
> The application in the classroom of modern critical approaches to literature is another practice that should inevitably involve the acquisition of more mature reading skills. If teachers would start to recognize that the teaching of literature in high school must necessarily involve the teaching of reading, at times explicitly, it would at least be a beginning. But in the long run, even more basic skills must be a part of any sound program of reading instruction. . . . (p. 156)

Today, preparation for teaching the complex reading component of "English" is finally beginning to get long overdue attention. Evidence of need is all but overwhelming. In summarizing this discussion, may I oversimplify and sum up the literature on the subject by saying that the English teacher's preparation must encompass cognitive and affective elements. It must include broad general education, rich specialized study in English, and professional knowledge of reading. But even if the English teacher in his role as teacher of reading hath all this, and hath not the ability to prepare youngsters to enter imaginatively and emotionally into the literary experience, he hath indeed become as a brassy cymbal —and, at that, a cymbal that doesn't even tinkle effectively.

Predicting the shape of things to come is hazardous. But predicting the future shape of multi-faceted "English" is less risky. Almost certainly one of the facets will be reading, and it will face, if not toward Mecca, at least toward literary salvation.

To know is not enough. To know and to know what is good to do, is still not enough. But to know and to know what is good to do, and to *do* it, ah! there is the desideratum devoutly to be wished —and sought after. With Marckwardt (19) may I quote Tennyson and say, "Come my friends, 'tis not too late to seek a newer world. Push off."

REFERENCES

1. Aukerman, Robert C. "Readability of Secondary School Literature Textbooks: A First Report," *English Journal*, 54 (Sept. 1965) 533-540.
2. Burton, Dwight L., and others. "A Check List for Evaluating the English Program in the Junior and Senior High School," *English Journal*, 51 (April 1962) 273-282.
3. "Trends in the Teaching of English," *Golden Anniversary Program*, 50th Convention of National Council of Teachers of English (Champaign, Illinois: National Council of Teachers of English, 1960).
4. Carlsen, G. Robert. "Counciletter: English in the Trenches," *English Journal*, 52 (April 1963) 305-307.
5. Commission on English. *Freedom and Discipline in English* (Princeton, New Jersey: College Entrance Examination Board, 1965), pp. 1-4.
6. Commission on the English Curriculum, National Council of Teachers of English, Alfred H. Grommon, ed. *The Education of Teachers of English*, Vol. V (New York: Appleton-Century-Crofts, 1963).
7. Commission on the English Curriculum, National Council of Teachers of English, Angela Broening, ed. *English Language Arts in the Secondary School*, Vol. III (New York: Appleton - Century - Crofts, 1956).
8. Committee on National Interest. *The National Interest and the Teaching of English* (Champaign, Illinois: National Council of Teachers of English, 1961).
9. Committee on the National Interest. *The National Interest and the Continuing Education of Teachers of English* (Champaign, Illinois: National Council of Teachers of English, 1964).
10. Conant, James Bryant. *The Education of American Teachers* (New York: McGraw-Hill and Co., 1963), p. 275.
11. Early, Margaret J. "Skills Development in the English Curriculum," Speech delivered at the workshop on Curriculum, State Department of Education, Hartford, Conn., *Dimensions of English* (June 1967) mimeographed.
12. El-Hagrasy, Saad M. "The Teacher's Role in Library Service," *Journal of Experimental Education*, 30 (June 1962) 347-364.
13. English Teacher Preparation Study. "Guidelines for the Preparation of Teachers of English—1963," William P. Viall, Director, *English Journal*, 57 (April 1968) 535-536.
14. Evans, William H., and Michael J. Cardone. *Specialized Courses in Methods of Teaching English* (Champaign, Illinois: National Council of Teachers of English, 1964).
15. Gunn, M. Agnella, Thomas G. Devine. Ralph C. Staiger, and David H. Russell. Manual for Teaching, *Exploration Through Reading* (Boston, Mass.: Ginn and Company, 1967), pp. 12-15.
16. Hoetker, James. "Teacher Questioning Behavior in Nine Junior High School English Classes," *Research in the Teaching of English*, 2 (Fall 1968), 99-106.
17. Illinois State-Wide Curriculum Center for Preparation of Secondary-School Teachers of English (ISCPET) J. N. Hook, Chm. "Qualifications of Secondary Teachers of English: A Preliminary Statement," *English Journal*, 57 (April 1968) 546-549.
18. Letton, Mildred. *Individual Differences in Interpretive Responses in Reading Poetry at the Ninth Grade Level* (Unpublished doctoral dissertation) (Chicago: University of Chicago, 1958).
19. Marckwardt, Albert H. NCTE Presidential Address: "Don't Ask: Inquire," *English Journal*, 57 (Feb. 1968) 159-165.
20. McGinnis, Dorothy J. "The Preparation and Responsibility of Secondary Teachers in the Field of Reading," *The Reading Teacher*, 15 (Nov. 1961) 92-97.
21. Meckel, Henry C. "What's Right in Our Preparation of English Teachers?" *Educating the Teacher of English*, David Stryker, ed. (Champaign, Illinois: National Council of Teachers of English, 1965), pp. 1-9.
22. Mersand, Joseph. *Attitudes Toward English Teaching* (Philadelphia: Chilton Company, 1961) 318-326.
23. National Council of Teachers of English, *Council-Grams*, 39 (Sept. 1967).
24. Parker, William Riley. "Where Do English Departments Come From?" *College English*, 28 (Feb. 1967) 339-351.
25. Rogers, Charlotte Dee. "Individual Differences in Interpretive Responses to Reading the Short Story at the Eleventh Grade Level," (Unpublished doctoral dissertation) (Tucson: University of Arizona, 1965).
26. Squire, James R. "Does the New English Demand a New English Education?" *The Changing Role of English Education*, Stan-

ley B. Kegler, ed. (Champaign, Illinois: National Council of Teachers of English, 1965), pp. 76-86.

27. Squire, James R. "Literacy and Literature," *English Journal*, 44 (March 1960) 154-160.
28. Squire, James R., and Roger K. Applebee. *High School English Instruction Today*, NCTE (New York: Appleton-Century-Crofts, 1968).
29. Strang, Ruth, and Charlotte Rogers. "How Do Students Read a Short Story," *English Journal*, 54 (Dec. 1965) 819-823, 829.
30. Stratemeyer, Clara G. "Language Arts in the School," *Educational Leadership*, 19 (Feb. 1962) 331-341.
31. Townsend, Agatha. "What Research Says to the Reading Teacher," *The Reading Teacher*, 16 (Jan. 1963) 261-264.

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*Quoted by permission from *Freedom and Discipline in English: Report of the Commission on English*, published in 1965 by the College Entrance Examination Board, New York.

**Quoted from Thomas G. Devine and Paul T. Rosewell, *Manual for Teaching*, to accompany *Exploration through Reading* by Mary Agnella Gunn, Thomas G. Devine, Ralph C. Staiger, and David H. Russell (Boston: Ginn and Company, 1967), by permission of Ginn and Company.

What Does Research in Reading Reveal—

About Reading and the High School Student?

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IN spite of the fact that there is an increasing awareness of the wisdom in establishing reading programs in high school, a comparatively small number of our youth receive systematic instruction in reading. Educators who studied this phenomenon have speculated about instructional explanations for the apparent omission: the belief that responsibility for teaching reading belongs solely to elementary schools; the lack of well-prepared personnel to direct and staff programs; an unawareness that large numbers of high school students might profit from direct help.

Our purpose in this section is to underscore the need for promoting reading as a common denominator of the high school curriculum, to provide a base for appreciating some conditions that influence growth in reading, and to encourage efforts in behalf of all our students.

Reading Ability of High School Youth

How well do our high school students read? What evidence do we have of the relationship between reading achievement and academic success? Just what are the reading needs of most youth? Research offers us some answers to these questions.

Reading Achievement

A number of investigations, as well as observations, provide information about the reading ability of students we teach. One large metropolitan school system studied the reading status of its freshmen and sophomores and reported that over 40 per cent were reading below their potential ability. More than 23 per cent were found to be reading two to five or more years below grade level (12). The reading scores of over three thousand high school students in a midwestern state showed why its schools should establish developmental and remedial programs without delay (43). Cooper (8) reported that 30,000 test scores drawn from a southern state showed a greater variance between reading ability and grade placement at secondary level than at elementary level. Ramsey (45) found in his state that eighth grade students achieved reading levels significantly below grade norms.

These and other studies demonstrate quite conclusively that a considerable portion of the high school population does not read as well as it should or could. Another way of stating this well-established fact: perhaps as many as one-fourth (and in some areas an even higher proportion) of students lack the reading skills they need to read the books with the comprehension expected of them. Is it any wonder so many boys and girls fail to grasp bare essentials, not to mention deeper meanings?

School Success

It is no small wonder that large numbers of high school students do poorly in English and other subjects. Many fail to complete their textbook and supplementary reading satisfactorily. That success in school is tied directly to reading achievement has been documented by the findings of research and experiences of teachers and administrators. The influence of reading ability even on such a subject as mathematics is recognized. Call and Wiggin (5) compared the results of instruction in understanding word meanings and tying them to mathematical symbols with no comparable help in solving word problems. They found that the students who received the instruction (from an English teacher!) achieved better results than did the students who did not receive such instruction from their mathematics teacher. Fay (14) studied the relationship of reading ability to different achievement areas. He reported that students of superior reading ability achieved significantly better in social studies than students who did not read as well. Carter (6) found that better readers have higher averages, study better, and are happier in school than poorer readers.

Perhaps one of the most telling studies that sought to appraise the effects of reading ability on school performance was conducted by Penty (42). She found that of the students whose reading was in the lowest quarter, close to 50 per cent left school before the twelfth grade, while just over 14 per cent in the highest quarter of reading left before graduating. She interviewed the dropouts six years later and discovered that in most cases they gave poor reading as the cause of their problems. Frustration, embarrassment, and boredom were products of their condition. Penty noted also that a very large percentage of the poor readers who dropped out of school as well as those who remained had the ability to read better. She deplored the fact that proper help in reading was not available to them. Penty's findings are corroborated by Bledsoe (2), Nachman (36), and Whitmore (64).

Who will deny a close association between reading ability and school achievement? What hope is there for our poorer readers to derive some satisfactions from their efforts? What is the school's responsibility to all students? The answer to each question seems clear; if we can send a man to the moon, it ought to be possible with persistence to make a real impact upon the lives of our youth through better reading. Surely we ought not settle for less.

Reading Needs

Naturally, teachers of English spend a considerable amount of time in the reading and study of literature. It is hardly necessary to explain the reasons for the emphasis they give to this effort. But how much time do they spend in teaching their students *how to read* literature? A recent survey of English teaching practices reported by Squire (56) covered 158 high schools. In the tenth grade less than 5 per cent of the instructional time was devoted to the teaching of reading and in the twelfth grade less than 3 per cent. Obviously, the teachers in these high schools saw little reason to devote more time to reading instruction. As Squire suggested, it is possible they expected their students to become discerning readers of literature merely from reading. But the evidence shows the contrary; comparatively few students achieve without guidance. And in view of the fact that so many of them are deficient in reading, it becomes even more necessary to help them overcome their weaknesses and achieve to the extent of which each is capable.

What are the skills needed by students to read literature and other content? Spache (54) lists the following: understanding and interpreting the content and grasping its organization, developing special vocabularies, concepts and symbols, evaluating what is read, selecting materials, recalling and applying what is read, and broadening interests, tastes, and experiences. Some of these are often included among the study skills. It is apparent that students with general reading ability possess some of these skills. However, we know now that not all of them can be taken for granted, and that it is necessary to offer direct instruction in most. Even students themselves are keenly aware of their reading and study weaknesses. Michaels (34) reported how eleventh grade students perceived their reading difficulties in literature, history, chemistry, and plane geometry.

A number of investigations provide support for direct instruction in specific reading skills and for reading in the content areas. Maney (33) and Sochor (53) found that interpretative reading ability appears to be independent of literal reading ability in science and social studies, respectively. The results of a previously cited study (5) underscore the importance of dealing with the vocabulary of mathematics in solving word problems. McDonald (31) in summarizing the research on reading flexibility concluded that there is need for systematic instruction in developing ability to read for different purposes. Strang and Rogers (58) studied the responses of high school juniors to a short story and concluded that there are marked differences between good and poor readers in their ability to respond to literal and implied meanings. Husbands and Shores (24) reviewed the literature and concluded that reading consists of different abilities that are needed for specific purposes in various content areas.

DeBoer and Whipple summarized the implications of these and related studies. "Thus, reading is not a generalized skill that, once developed in an English class, can be applied in a special field. Rather, reading involves the ability to interpret this or that particular area of experience. Basic instruction, no matter how excellent, is not enough. Reading abilities must be developed in the areas where they are to be used" (10).

Personal Factors and Reading

Is it realistic to expect equal performances in reading of all our students? Perhaps the answer to this question will be found in another: Are all our students of equal height and do they possess the same athletic prowess? We know they are quite different in many respects, not the least of which is reading ability. The studies cited earlier (8, 12, 43, 45) as well as others yielded results which underscore the existence of significant differences in reading performances, not only between grades but also within grades. A number of personal factors among which are intelligence, sex, interests and attitudes, and language development accounts for some of these differences.

Intelligence

There appears to be a significant relationship between reasoning ability and reading achievement. Paterra (41) suggested on the basis of her findings that reading should be improved through programs that stress verbal reasoning. Jan-Tausch (25) reported that his advanced readers were better able to do abstract thinking than his poorer readers. Braun (4) reported a significant difference in concept formation between her superior and poor readers. Harootunian and Tate (19) obtained correlations between reading test scores and seven intellectual abilities described by Guilford. Both Harris (20) and Fransella and Gerver (15) concluded that the relationship between IQ and reading as measured by such tests as the Stanford-Binet and WISC, respectively, increases with chronological age.

At this point it is necessary to affirm that some intelligence tests fail to distinguish between slow learners and poor readers. Experimenters have noted the truth of this observation, especially when group verbal tests are used to assess mental ability. Such tests usually require reading ability to insure high performance; obviously, poor readers are penalized under these circumstances. Too often students of average and superior ability are classified as inferior learners on the basis of the results from inadequate tests.

Another caution: We ought not to assume that slow learners are unable to profit from reading instruction. What they require is a more moderately paced program with carefully selected materials and proper guidance. The fact that this group of students seem to learn well through programmed instruction which combines the aforementioned conditions suggests reasonable returns from real efforts to teach them.

Sex

Girls seem to have a slight edge over boys in reading development. Whether or not the difference exists because of constitutional and/or environmental factors remains to be determined. The differences, however, seem to be more marked in the formative years rather than during the later ones. Singer (50) reported superior achievement in reading speed for girls in the sixth grade. Seventh grade girls in the below and above normal ranges of intelligence surpassed boys of comparable ability in reading vocabulary (51). Other investigators (30) obtained similar results in the above-average IQ range but the differences between boys and girls decreased with age.

Boys with serious reading problems outnumber their female counterparts by about four to one. Whether or not this phenomenon is the product of physical, cultural, and other societal conditions is a question whose answer is unknown. Speculation persists in the absence of hard facts.

Interests and Attitudes

The interests and attitudes which adolescents possess seem to have a profound influence upon their reading behaviors. Such personal factors have their origins in home and other environmental settings. Past and ongoing experiences account for variations in motivation to learn and in actual performance.

There is an accumulating body of evidence about the influence of home conditions on students' reading development. Hughes and Willis (22) found that parents of students who read widely, read more, and had more interests than parents of another group of students matched for sex and intelligence. Watson (62) found that poor reading dropouts came from less stable and lower socio-economic homes than did successful high school graduates. Keshian (26) concluded that successful readers had parents who had shown great interest in reading and books and in school work and who built solid family units. MacDonald (32) reported that parents of unsuccessful male readers who attended public schools possessed significantly more negative attitudes than found in parents of successful students.

The development of wholesome attitudes toward reading has been the subject of much discussion and research. Many writers have suggested that if reading is to have a place among favored activities in which adolescents engage, basic human needs must be met through it. Perhaps the one need which is met most directly by reading is the *need to know*. Research on the reading preferences of high school students tends to support this judgment. Shores (49) sought to determine what they seek in books. He concluded that information about national and international problems rather than about personal and social matters dominated their interest. Whitman (63) polled large numbers of superior high school students and found that they selected books which helped shape attitudes and provided information.

Perhaps one of the most significant outcomes of research on the interests of high school students is the recognition that reading preferences of boys and girls vary and that these preferences do not seem to be greatly influenced by reading ability or intelligence. As a group, boys prefer books which contain elements of excitement, suspense, adventure, action, and humor. Girls look for books which deal with love, sadness, home, and mystery (38, 57, 60). These differences in reading preferences could have some bearing upon the outcomes of our efforts to teach reading and instill in youth a love for reading. Materials which fail to satisfy are not likely to promote either goal.

Language Development

Differences in language abilities seem to account for some of the variability in reading achievement. A longitudinal study of oral language by Loban (29) in which he contrasted high and low achievers in language development showed definite relationship between competence in the latter and reading. Strickland (59) recorded the spoken language of children and after analyzing structural patterns concluded among other things that those who made more use of them ranked higher in reading, both oral and silent.

Vocabulary development and reading achievement have been the subjects of a number of investigations. The conclusions that vocabulary and reading comprehension are closely related and that word knowledge is one of the significant contributors to meaning have been confirmed (39, 47). Holmes (21) and Singer reported that vocabulary played a very important role in accounting for high school students' power in reading. Knowledge of vocabulary both in and out of context helped to differentiate between good and poor readers.

Research on listening and reading, both receptive skills, has been summarized by Duker (13) and Devine (11). They reported positive and high correlations between them and concluded that it would be useful to study further the nature of this relationship. Both point out the distinct possibility that similar mental processes account for reading and listening skills and that additional research on these questions might provide guidelines for teaching strategies.

Reading for All Youth

Inasmuch as our free society requires youth to attend school until the age of sixteen or seventeen is reached, it seems fairly obvious that aside from the commitment we have to education generally, we must be equally committed to the proposition that every student has a right to instruction from which he can profit. Acceptance of this tenet precludes any justification for not providing educational programs that serve youth. Thus it is not difficult to explain measures designed to aid the disadvantaged and the slow learner as well as the gifted. The fact that these populations are difficult to reach is no excuse for ignoring them.

The Disadvantaged

Efforts to describe disadvantaged or culturally different adolescents had led to the conclusion that they exhibit similar characteristics but that there is sufficient variation among them to warrant consideration of appropriate educational environments. Studies show that they generally are weak in the use of spoken and written English (28, 52), that they are generally educationally retarded (16, 40), and that they possess a low level of self-esteem and aspiration (1, 18). Hunt and Dopyera (23) found that their degree of self-determination was lower than that of middle-class adolescents but that they showed great variation in conceptual level. Others (17, 35) also point out variabilities among culturally disadvantaged youth.

The fact that many disadvantaged adolescents are weak in English and reading has produced specific recommendations regarding this aspect of their educational programs. Bloom (3) reviewed the research and recommended greater emphasis upon language development and reading. Wachner (61) described the Detroit Great Cities Project and its adoption of the core program in English and social studies and the establishment of reading improvement classes and reading rooms. A task force of the National Council of Teachers of English (37) observed more than fifty programs for the disadvantaged and noted the traditional use of anthologies with students who were neither capable of nor interested in reading the selections. It recommended literature appropriate to the abilities of students and de-emphasis of traditional grammar. Spiegler (55) described different programs for the disadvantaged which included reading of books and magazines to build a better self-image and reading skills, using "experience stories" for corrective reading, and introducing "traditional" literature through oral readings, films, tapes, TV, and recordings.

It should be obvious that there are no magical formulas for overcoming deficits in culturally disadvantaged students. Much more has to be known about the interrelationships of factors that distinguish this school population from others and how teachers can best deal with them. However, this state of affairs should not be used as an excuse for indifference and inaction. Some inroads into language and reading deficiencies have been made; our continuing efforts through practice, demonstration and research are likely to have a salutary effect upon the achievements of all our students.

The Slow Learner

Slow learners are not to be confused with the mentally retarded or educable mentally retarded. "The slow learners are the highest intellectual group of retarded children and are largest in number. They form the 15 to 17 per cent of the school population that cannot quite 'keep up' and are usually doing the poorest work in the regular classroom. Slow learners are essentially normal in their emotional, social, physical, and motor development. Even in intellectual development, the slow learners are at the lower fringe or range of the normal group. Thus, while they are retarded and consequently have difficulty in 'keeping up' with the rest of the class, their deviation is not so great that they cannot be adequately educated in a regular classroom situation" (9).

From this description it appears obvious that slow learners are capable of mastering many reading skills and sharing the joys of reading for pleasure. Their reading needs at the high school level will be as varied as those of other students, but a larger proportion of slow learners will be found at the lower ranges. A number of disadvantaged students are known to be slow learners, and programs for them require adjustments on more than a single level.

For a number of reasons, a slow learner is bound to be behind the "normal" reader by the time he enters high school. And he is likely to fall behind further unless he receives help—but at a slower pace—that most of his age-peers also require. Not unlike other youth, he probably has some weaknesses in word identification, study skills, and/or comprehension. Although he is not likely to engage in higher academic study, he needs the same opportunities to develop and take his place in an increasingly complex society. Teaching him how to read better through programs suited to his abilities and requirements will enable him to experience some successes in school as well as prepare him for the responsibilities he must assume later.

The Gifted

Do all our gifted students achieve in reading to the extent of which they are capable? Can they profit from reading instruction? That there are underachievers among the gifted has been documented by Combs (7), Shaw (48), and Pippert and Archer (44), among others. Krippner and Herald (27) conducted an investigation to determine if the causes of poor reading among gifted students differed from those of average students. They found similar explanations for reading difficulties for both groups. Woolcock (65) studied the reading habits of gifted high school girls. He reported that their evaluation of reading weaknesses included deficiencies in vocabulary and skimming. A metropolitan school system organized an intensive reading program for gifted students. Immediate and delayed results confirmed the values that such programs offered (46).

From data secured from these and other studies, it seems reasonable to conclude that the reading abilities of gifted students vary, and that instruction to help overcome any deficits these students might have will be as beneficial to them as to other school populations. To exclude gifted students from developmental and remedial reading programs is unrealistic and possibly damaging. Our responsibility is to provide for all youth; to do less fails to serve them and society.

REFERENCES

1. Ausubel, David, and Pearl Ausubel. "Ego Development Among Segregated Negro Children," in Harry Passow, ed., *Education in Depressed Areas* (New York: Bureau of Publications, Teachers College, Columbia University, 1963), pp. 109-141.
2. Bledsoe, Joseph. "An Investigation of Six Correlates of Student Withdrawal from High School," *Journal of Educational Research*, 53 (Sept. 1959) 3-6.
3. Bloom, B., A. Davis, and R. Hess. *Compensatory Education for Cultural Deprivation* (New York: Holt, Rinehart and Winston, Inc., 1965).
4. Braun, Jean. "Relation Between Concept Formation Ability and Reading Achievement at Three Developmental Levels," *Child Development*, 34 (Sept. 1963) 675-682.
5. Call, R., and N. Wiggin. "Reading and Mathematics," *Mathematics Teacher*, 59 (Feb. 1966) 149-157.
6. Carter, Harold. "Over and Underachievement in Reading," *California Journal of Educational Research*, 15 (Sept. 1964) 175-183.
7. Combs, Charles. "Perception of Self and Scholastic Achievement in the Academically Capable," *Personnel and Guidance Journal*, 43 (Sept. 1964) 47-51.
8. Cooper, Bernice. "An Analysis of the Reading Achievement of White and Negro Pupils in Certain Public Schools of Georgia," *School Review*, 72 (Winter 1964) 462-471.

9. Cruickshank, W., and O. Johnson, eds. *Exceptional Children and Youth* (Englewood Cliffs: Prentice-Hall, Inc., 1958).
10. DeBoer, John, and Gertrude Whipple. "Reading Development in Other Curriculum Areas," *Development In and Through Reading*, Sixtieth Yearbook, Part I, of the National Society for the Study of Education (Chicago: University of Chicago Press, 1961), p. 57.
11. Devine, Thomas. "Listening," *Language Arts and Fine Arts, Review of Educational Research*, 37 (April 1967) 152-158.
12. Donovan, Bernard. *Survey of Reading Abilities of Pupils Entering the Academic High Schools* (New York: Board of Education, 1955).
13. Duker, Sam. "Listening," *Language Arts and Fine Arts, Review of Educational Research*, 34 (April 1964) 156-163.
14. Fay, Leo. "The Relationship Between Reading Skills and Selected Areas of Sixth Grade Achievement," *Journal of Educational Research*, 43 (March 1950) 541-547.
15. Fransella, F., and D. Gerver. "Multiple Regression Equations for Predicting Reading Age from Chronological Age and WISC Verbal IQ," *British Journal of Educational Psychology*, 35 (Feb. 1965) 86-89.
16. Goldberg, Miriam. "Factors Affecting Educational Attainment in Depressed Urban Areas," *Education in Depressed Areas*, Harry Passow, ed. (New York: Bureau of Publications, Teachers College, Columbia University, 1963), pp. 68-99.
17. Goodman, Paul. "The Universal Trap," *The School Dropout*, D. Schreiber, ed., (Washington: National Education Association, 1964), pp. 40-53.
18. Gottlieb, David. "Goal Aspirations and Goal Fulfillments: Differences Between Deprived and Affluent American Adolescents," *American Journal of Orthopsychiatry*, 34 (Oct. 1964) 934-941.
19. Harootunian, B., and M. Tate. "The Relationship of Certain Selected Variables to Problem Solving Ability," *Journal of Educational Psychology*, 51 (Dec. 1960) 326-333.
20. Harris, Albert. "Reading and Human Development," *Development In and Through Reading*, Sixtieth Yearbook of the National Society for the Study of Education, Part I (Chicago: University of Chicago Press, 1961), pp. 17-34.
21. Holmes, Jack. "Speed, Comprehension and Power in Reading," *Challenge and Experiment in Reading*, Conference Proceedings of the International Reading Association, (Newark, Delaware: The Association, 1962), pp. 143-149.
22. Hughes, M., and P. Willis. "Personal Reading: A Study of a Seventh Grade," *On Becoming a Reader*, Proceedings of the Claremont Reading Conference, 29 (1965) 90-101.
23. Hunt, D., and J. Dopyera. "Personality Variation in Lower-Class Children," *Journal of Psychology*, 62 (Jan. 1966) 47-54.
24. Husbands, K., and J. Shores. "Measurement of Reading for Problem Solving: A Critical Review of the Literature," *Journal of Educational Research*, 43 (Feb. 1950) 453-465.
25. Jan-Tausch, James. "Concrete Thinking as a Factor in Reading Comprehension," *Challenge and Experiment in Reading*, Conference Proceedings of the International Reading Association (Newark, Delaware: The Association, 1962), pp. 161-164.
26. Keshian, J. "The Characteristics and Experiences of Children Who Learn To Read Successfully," *Elementary English*, 40 (Oct. 1963) 615-616, 652.
27. Krippner, S., and C. Herald. "Reading Disabilities Among the Academically Talented," *The Gifted Child Quarterly*, 8 (Spring 1964) 12-20.
28. Labov, William. "Stages in the Acquisition of Standard English," *Social Dialects and Language Learning*, U. S. Dept. of Health, Education and Welfare, Office of Education, Cooperative Research Project No. F-059 (Champaign: National Council of Teachers of English, 1964), pp. 77-103.
29. Loban, Walter. *The Language of Elementary School Children* (Champaign: National Council of Teachers of English, 1963).
30. Loughlin, L., H. O'Connor, M. Powell, and K. Parsley. "An Investigation of Sex Differences by Intelligence, Subject-Matter Area, Grade and Achievement Level on Three Anxiety Scales," *Journal of Genetic Psychology*, 106 (June 1965) 207-215.
31. McDonald, Arthur. "Flexibility in Reading Approaches: Measurement and Development," *Combining Research Results and Good Practice*, Conference Proceedings of the Annual Convention, Vol. 11, Part II (Newark, Delaware: The Association, 1966), pp. 67-71.
32. MacDonald, D. "An Investigation of the Attitudes of Parents of Unsuccessful and Successful Readers," *Journal of Educational Research*, 56 (April 1963) 437-438.
33. Maney, Ethel. "Literal and Critical Reading in Science," *Journal of Experimental Education*, 27 (Sept. 1958) 57-64.
34. Michaels, Melvin, "Subject Reading Improvement: A Neglected Teaching Responsibility," *Journal of Reading*, 9 (Oct. 1965) 16-20.

35. Miller, S. M. "Dropouts—a Political Problem," *The School Dropout*, D. Schreiber, ed. (Washington: National Education Association, 1964), pp. 11-24.

36. Nachman, Leonard, Russell Getson, and John Odgers. *Pilot Study of Ohio High School Dropouts, 1961-1962* (Columbus, Ohio: State Department of Education, 1963).

37. National Council of Teachers of English. *Language Programs for the Disadvantaged* (Champaign: National Council of Teachers of English, 1965).

38. Norvell, George. *The Reading Interests of Young People* (Boston: D. C. Heath & Company, 1950).

39. O'Donnell, Roy. "Awareness of Grammatical Structure and Reading Comprehension," *High School Journal*, 45 (Feb. 1962) 184-188.

40. Osborne, R. "Racial Differences in Mental Growth and School Achievement," *Psychological Reports*, 7 (Oct. 1960) 233-239.

41. Paterra, Mary. "A Study of Thirty-three WISC Scattergrams of Retarded Readers," *Elementary English*, 40 (April 1963) 394-405.

42. Penty, Ruth. *Reading Ability and High School Dropouts* (New York: Bureau of Publications, Teachers College, Columbia University, 1956).

43. Peyton, J., and R. Below. "The Need for Reading Instruction in Kentucky High Schools," *School Service Report*, 6 (Oct. 1965) 2-7.

44. Pippert, R., and N. Archer. "A Comparison of Two Methods of Classifying Underachievers with Respect to Selected Criteria," *Personnel and Guidance Journal*, 41 (May 1963) 788-791.

45. Ramsey, Wallace. "The Kentucky Reading Study," *The Reading Teacher*, 16 (Dec. 1962) 178-181.

46. Rochester City School District. *The Tutorial Reading Program: A Second Year Progress Report for an Exploration in Small Group/Individualized Reading for Above-Average Pupils* (Rochester, New York: Rochester Public Schools, 1963).

47. Russell, David. "Six Studies of Children's Understanding of Concepts," *Elementary School Journal*, 63 (Feb. 1963) 255-260.

48. Shaw, M., and G. Alves. "The Self-Concept of Bright Academic Underachievers," *Personnel and Guidance Journal*, 42 (Dec. 1963) 401-403.

49. Shores, J. Harlan. "Reading Interests and Informational Needs of High School Students," *The Reading Teacher*, 17 (April 1964) 536-544.

50. Singer, Harry. "Substrata-Factor Theory of Reading: Grade and Sex Differences at the Elementary School Level," *Improvement of Reading Through Classroom Practice*, Conference Proceedings of the International Reading Association (Newark, Delaware: The Association, 1964), pp. 313-320.

51. Sinks, N., and M. Powell. "Sex and Intelligence as Factors in Achievement in Grades Four Through Eight," *Journal of Genetic Psychology*, 106 (March 1965) 67-79.

52. Smiley, Marjorie. "Research and Its Implications," *Improving English Skills of Culturally Different Youth*, U. S. Dept. of Health, Education and Welfare, Office of Education Bulletin 1964, No. 5 (Washington: Government Printing Office), pp. 35-61.

53. Sochor, Elona. "Literal and Critical Reading in Social Studies," *Journal of Experimental Education*, 27 (Sept. 1958) 49-56.

54. Spache, George. "Reading in Various Curriculum Fields," *The Reading Teacher*, 11 (Feb. 1958) 158-164.

55. Spiegler, Charles. "Provisions and Programs for Educationally Disadvantaged Youth in Secondary School," *The Educationally Retarded and Disadvantaged*, Sixty-sixth Yearbook of the National Society for the Study of Education, Part I (Chicago: University of Chicago Press, 1967), pp. 184-210.

56. Squire, James. "Reading in the American High Schools Today," *Reading and Inquiry*, Proceedings of the Annual Convention, International Reading Association (Newark, Delware: The Association, 1965), pp. 468-472.

57. Stanchfield, J. "Boys' Reading Interests as Revealed Through Personal Conferences," *The Reading Teacher*, 16 (Sept. 1962) 41-44.

58. Strang, Ruth, and Charlotte Rogers. "How Do Students Read a Short Story?" *English Journal*, 54 (Dec. 1965) 819-823, 829.

59. Strickland, Ruth. *Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and to the Quality of Reading of Selected Children*, Bulletin of the School of Education, Indiana University, 7, No. 4, (July 1962).

60. Vaughn, Beryl. "Reading Interests of Eighth-Grade Students," *Journal of Developmental Reading*, 6 (Spring 1963) 149-155.

61. Wachner, Clarence. "The Detroit Great Cities School Improvement Program in English," *Improving English Skills of Culturally Different Youth*, U. S. Dept. of Health, Education and Welfare, Office of Education Bulletin 1964, No. 5 (Washing-

ton: Government Printing Office), pp. 123-133.

62. Watson, R. L. "Early Identification of High School Dropouts," *Reading and Inquiry*, Proceedings of the Annual Convention, International Reading Association (Newark, Delaware: The Association, 1965), pp. 265-267.
63. Whitman, Robert. "Significant Reading Experiences of Superior English Students," *Illinois English Bulletin*, 51 (Feb. 1964) 1-24.
64. Whitmore, P., and R. Chapman. *Dropout Incidence and Significance at Modesto High Schools, 1961-64* (Modesto, California: Modesto Public Schools, 1965).
65. Woolcock, Cyril. "Guiding the Reading of Superior Students in a Special High School," *The Reading Teacher*, 16 (May 1963) 448-451.

What Does Research in Reading Reveal—

About Attitudes Toward Reading?

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THE attitudes of student readers vary with the personal predispositions of each reader. They are affected by an individual's skill in responding to a literary work; by the ethical, experiential, and literary background that each brings to reading; by elements of the content within each reading selection; and by the form in which the work is written. They are influenced, moreover, by the way in which a selection is presented in the classroom, how it is read and discussed, and how the teacher organizes instruction. In short, what is presently known from research suggests that the impact of the attitudes of individuals tends to be unique, personal, and highly unpredictable. Still, research has suggested certain common characteristics which need consideration in planning high school programs in literature. In this article, these findings are summarized in five separate areas: the nature of reading interests, the nature of response to literature, the effects of reading on the individual, factors involved in taste and appreciation, and the effects of instruction.

The Nature of Reading Interests

For decades the reading interests of adolescents have been intensively surveyed in a series of studies, which, if often superficial in design and naive in their failure to identify the personal attributes reflected in the interests, have at least provided the schools with abundant evidence concerning the choices that young people exercise in their reading. That such studies have had a considerable influence in affecting books selected for supplementary reading programs in the junior and senior high school has been demonstrated by Meckel (35).

In 1955 Robinson pointed to more than 200 special studies of reading preferences; and at a slightly decelerating rate, more have been reported each year (48). Among the more significant of the early studies are those by Terman and Lima (66), Thorndike (67), and Wollnar (76). The findings reveal broad agreement on the factors involved: intelligence, for example, is not a markedly significant factor in affecting the reading preferences of a majority of readers;

sex difference, on the other hand, is highly significant. The age of the reader appears as a more significant factor during the elementary school years than later. Television also plays a major role in directing interests toward the social life of a highly mechanized society, according to exhaustive studies by Witty (74). Differences in socioeconomic backgrounds seem to affect reading preferences. Boys and girls in middle and low socioeconomic groups, for example, tend to read first for recreational purposes, then for informative, identificational, and aesthetic purposes (17). Differences in the reading interests of various racial groups have also been noted in recent studies (41). Black students, for example, express a stronger preference than do white students for reading current material, such as magazines and newspapers, and also for selections dealing with personal problems and social relations. Specific elements of content in the reading material evoke markedly different response patterns. Scientific themes and such elements as humor, surprise, and a stirring plot tend to appeal to most young readers. Boys respond well to sports, action, and adventure; girls to romance, fictional (as opposed to real) characters, and depictions of adolescent life. Using personal interviews with 153 boys in Grades 4, 5, and 8, Stanchfield confirmed sex differences in reading preferences reported in earlier studies and stressed the importance of using books with masculine appeal during early adolescence (62).

Norvell studied the reactions of large numbers of young people to specific titles frequently included in school programs. His influential work has proven helpful in determining which standard works to require in the curriculum (38, 39). Helpful suggestions are also provided by Whitman's report on the titles which superior college students recalled as their most memorable reading experiences in secondary school (71).

Studies tend to demonstrate that attitudes to reading and skills in reading involve different factors. Clarke, for example, found that most retarded junior high school readers responded well to specially written stories about characters with whom they could identify, but only half improved in tested reading achievement (10). The aesthetic quality of a selection does not necessarily stimulate a positive reader reaction. Simpson and Soares asked 4,250 junior high school students to rate 862 short stories, then analyzed the 77 least-liked and best-liked selections (54). Among the factors of high appeal were physical action, conflict, suspense, a single unifying action, and concrete and clear language. Among the selections least-liked by the students were stories considered to be well written by adult critics. Jungeblut and Coleman tested the reactions of 4,088 children to 32 selections and confirmed that reactions to style and content varied with age, although they found that certain selections had general appeal (28).

Squire and Applebee reported that 16,089 students in outstanding high school English programs read an average of eight books a month and expressed a decided preference for the public library as the source of books for personal reading (60). The investigators attributed the preference to the inadequacy of school book collections. Repeating their study in selected schools in the United Kingdom, the same investigators found similar results in the reading preferences of 4,301 British students (61). Like their American counterparts, the British adolescents reported reading about eight books a month, preferred public libraries to school libraries, and displayed similar preferences for various literary genres at equivalent ages. Moreover, both British and American young people report reading out of school about the same number of hours each week, although two-thirds of the reading reported by American adolescents is assigned by teachers, whereas only one-third of the reading of British students is so assigned. Indeed so similar were the preferences expressed by British and American students that seven of the then specific titles mentioned most frequently as "particularly significant reading experiences" by able graduating high school students, are found on the lists from both countries. *Lord of the Flies* was mentioned most frequently by the 16,089 Americans and 4,301 British, but *1984* and The Bible also appear among the most frequently mentioned titles in each country. The major national differences emerging from this comparative study seemed to reflect compelling differences in current social attitudes in the two countries. Whereas British adolescents frequently expressed interest in titles dealing with the social class struggle; e.g., *Sons and Lovers*, American young people preferred titles dealing with racial conflicts; e.g., *Black Like Me*, *To Kill a Mockingbird*, and *Cry, the Beloved Country*.

For teachers, librarians, and parents, a comprehensive summary of what is known about adolescent reading preferences has been prepared by Carlsen (7). This informed guide to books for adolescents summarizes what is known about reading interests, provides lists of annotated titles, and suggests the role that books can play in offering young readers insights into new experiences and values as well as confronting them with "the basic, eternal problems of human beings, thus helping the individual to see himself as a part of an ongoing history." Carlsen draws heavily on a body of studies by individuals like Alm (2), Dunning (15), and Agee (1) who analyzed the assumptions about human experience presented in books written for adolescent readers and their potential value in the educative process.

The Nature of Response to Literature

Comparatively little is known about the way in which readers respond to a literary work and about the reader's acquisition through reading of fresh insights into human behavior which affect his personal attitudes. Studies have continued to reveal that the nature of literary response is a highly personal phenomenon affected by emotional reactions to the ideas in literary selections (35, 56, 59, 21). Rogers studied individual differences in the responses of fourteen high-level and fourteen low-level readers and found the variation in individual responses (as distinct from attitudes toward reading) to be unrelated to reading ability (49). Whitehead found differences in sex, age, and school less important than the qualities of a novel in affecting the reader's ease of identification (70). Russell examined seventy-three studies on the impact of reading on the individual and identified four variables affecting responses: the form of the reading materials, the content and ideas, the reader himself, and the setting in which responses are made (51). Russell reported investigators found it difficult to distinguish the influences of reading on other activities.

Several decades of study have only begun to develop understanding about the processes of response. In an early analysis, Downey related literary response to the psychological doctrine of identification (14). She presented a threefold classification of responses: the Ecstatic, where the self-conscious reader is merged with the subject that he is enjoying; the Participator, where the reader assumes one personality after another; the Spectator, who is detached from the action and evaluates as an observer. Downey hypothesized that the type and content of the literary selection affected the mode of response.

Richards analyzed the misinterpretations of selected college readers of thirteen poems of unknown authorship, and discovered not only stereotyped responses and difficulties in comprehension but also effects of general critical and technical prejudgments which the individual brings to his reading (47). Rosenblatt emphasized the interaction of the literary work and the reader, suggesting that individuals tend to read works that have possibilities for significant interaction (50).

Squire analyzed the responses of fifty adolescent readers to four short stories and reported covariation of literary judgments (dealing with formal qualities) and emotional self-involvement responses (59). Fewer literary judgments occur while adolescents read the central portion of a story than occur before involvement or at the end of reading. Squire also identified six sources of misinterpretation in adolescent responses: failure to grasp the essential meaning; reliance upon patterns of stereotyped thinking; unwillingness to accept unpleasant facts in interpreting characters and their actions; critical predispositions; irrelevant associations; and unwillingness to suspend judgment until the story is completed. Using a similar method for classifying responses of college students to novels, Wilson reported an increase in the proportion of interpretative responses over prescriptive judgments, suggesting that individuals may be better able to control their emotional reactions as they grow older (73). He found that students begin involvement with literature in a comparatively groping and emotional fashion, with only their later responses formulated in logical ways, and he urged teachers of literature to permit comparatively free responses to literary works before considering a close analysis.

The suggestion in Wilson's study that the more sophisticated reader is able to control his emotional reactions while reading and thus achieve a more objective reaction is supported by the theoretical views of Harding, who believes that the mode of response of the mature reader of a novel can be regarded as an extension of the mode of response by an onlooker of actual events (24). The reader not only enters into the experience but contemplates the experience; he knows that the characters in a literary selection are only part of a convention by which the author presents an evaluation of possible human experience. This view of the reader's response at the receiving end of a conventional mode of communication contrasts sharply with the conception of the process of response as one involving primarily identification and vicarious experience.

Early suggested that the maturity of the reader may affect the nature of his response and hypothesized that as readers grow older they pass through three stages of responses: from unconscious enjoyment to self-conscious appreciation to conscious delight (16).

Discussions at the Anglo-American Seminar at Dartmouth College in 1966 culminated in agreement that the quality of the literary experiences of each pupil contributes more to the education of the imagination than does mere acquisition of knowledge about literature (37, 13). In a report prepared for the Dartmouth Seminar Study Group, Squire indicates that one measure of a sound literary education is how students extend and deepen their responses to reading as they progress through schools (58).

How Reading Affects Individuals

A series of studies have identified some of the effects which reading can have on individuals. Waples and others reported that adult reading had six social effects: instrumental; acquisition of useful information; increased self-esteem and prestige; reinforcement of personal views; distraction from anxieties; and enriched aesthetic experiences (69). Loban reported significant differences in responses to reading of highly sensitive and less sensitive adolescent readers, particularly to stories intended to evoke human sympathy (33). Loban also found a consistent tendency of subjects to identify with adolescents most closely resembling themselves.

Lodge showed that the reading of biography can influence the ideas held by some junior high school students (34). Blount found the reading of junior novels to influence adolescent attitudes toward the "ideal" novel; he also said that factors in the novel (form, content of ideas) are more important than factors in the reader (sex, scholastic ability) or the setting in which the novel is read (4). Tatara reported that the reading of four novels about scientists affected student concepts of scientists, although not always in positive ways (65). However, intelligence and skill in critical reading may partially minimize the effect of bias on reading responses. Brown, for example, found virtually no relationship between attitudes toward racial issues and communism and the critical reading responses of 270 tenth grade college-preparatory students, although she did report that favorable attitudes correlated positively with the number of correct answers (6). That careful selection of literature over a long period of time can affect the attitudes of large numbers of students is demonstrated by Daigh in his analyses of the uses of literature as a pedagogical tool in educating youth in Nazi Germany (12). While shunning direct political instruction through literature, German educators carefully selected class readings and placed books in libraries which awakened in young readers "the consciousness of being a German" and developed "an awareness of his duty to party, fatherland, and people, all of whom had made sacrifices for the common good." All evidence collected by Daigh, largely circumstantial, suggests that the program was reasonably successful, particularly on young people exposed to several years of relatively subtle suggestion.

A number of studies thus suggest that reading affects individuals in various ways, but the nature of the interaction is highly individualistic. Russell and Shrodes and Herminghaus examined the possible uses of bibliotherapy, reported the impact of literature on individuals cannot be predicted, and cautioned against the indiscriminate use of books to promote change in attitudes and behavior (52, 26). Sandefur and Bigge explored the impact of reading on adolescent behavior (53). Recent studies in this area continue to demonstrate the therapeutic impact of books on some patients in clinical situations, but also the lack of adequate theory and professional standards even in the mental health fields (3, 43). Although studies of bibliotherapy are interesting for what they reveal about the impact of reading, they seem to have few implications for the classroom.

Factors Involved in Taste and Appreciation

Studies have attempted to identify the factors involved in the appreciation of literature. In a comprehensive review, Smith and others recently summarized what is known about the development of taste in literature (56). Williams and others applied five tests of literary appreciation to more than two hundred children and adolescents and found that a general factor of literary appreciation, correlated with intelligence, accounted for 50 per cent of the variation in response, whereas a second bipolar factor, accounting for 20 per cent of the variance, separated readers preferring the objective, form-conscious styles of the classicists from those preferring the subjective approaches of the romantic school of writers (72).

Gunn also identified a general factor associated with such factors as liking, emotional effect, mode of expression, and appeal of the subject, as well as a bipolar factor distinguishing readers concerned with rhyme, word music, and rhythm from those concerned with emotional effect, appeal of the subject, and mental imagery (22).

Carroll studied six dimensions of style: General Stylistics Evaluation, Personal Affect, Ornamentation, Abstractness, Seriousness, and Characterization versus Narration (8). He attempted to quantify aspects of style by analyzing 150 passages of English prose in accordance with twenty-nine adjectival scales covering major qualities and traits. He found a factor called General Stylistics Evaluation indicating a positive or negative evaluation which seemed to support earlier findings on the existence of a general factor.

Peel used Osgood's semantic differential to analyze the preferences of readers for qualities of a work of art by applying a set of twenty scales including measures of vividness, depth, and clarity to selections from twelve major novelists (42). He noted that responses to paintings evoke more or less instantaneous attitudes, whereas responses to prose and poetry often require longer reflection on the part of the reader. His hypothesis seems to support Wilson's finding that initial responses to literature tend to be ambiguous and groping.

In studies of response to literature, the method of analysis may be of as much importance to research as the reported findings. Investigators have relied on paper and pencil reactions, on case studies of readers, on written responses obtained after reading is completed, and on scales to indicate degree of identification. Forman found free responses more helpful than responses elicited by specific questions in attempting to measure appreciation (19). Squire recorded and analyzed oral responses to the reading of segments of short stories (59).

An important new tool for assessing responses to literature is provided by Purves, who examined the written responses and comments of thirteen critics, one hundred school and college teachers, and two hundred children (44, 45). He identified seventy separate elements involved in response to literature and classified them under four major categories: Engagement (involvement), Perception (understanding), Interpretation, and Evaluation. Using this method of analysis in a pilot study of reactions to literature, he found important differences in the reactions of thirteen-year-old American, British, German, and Belgian students, differences which he attributed to varying educational and cultural patterns.

The Effects of Instruction

Approaches to the reading and study of literature introduced in the classroom may also affect the attitudes and responses of readers. However, experimental studies of instructional procedures in teaching literature have been sporadic and disappointing, perhaps because researchers have lacked valid and reliable instruments for assessing the effectiveness of teaching. A few findings do suggest ways in which classroom approaches may affect student attitudes.

Smith and Gallo, for example, are among those reporting that discussion of a book with peers is highly important in encouraging young people to read (55, 20). Other influences which encourage reading are recommendations of parents, book displays, and book clubs. The influence of teacher and librarian recommendations seems to vary, depending on the closeness of the relationship established in other activity.

Taba, for example, analyzed the responses of high school students in discussing literature and reported that factual restatement of ideas predominated (64). Only 12 per cent of the students generalized concerning the meaning of the narrative. Taba noted, however, that group discussion tended to push the level of thinking beyond the levels which individuals reach on their own. Support for group discussion was also presented by Casper who found that adult-led junior Great Books discussions encouraged divergent thinking, the ability to form new ideas (9).

Wolfe, Huck, and King found that the kinds of questions that elementary teachers ask children about literature influence the responses of children (75). Analytical questions tend to stimulate analytical thinking. Similar investigation is needed at the secondary level.

Such studies clearly suggest that the nature in which reading is discussed may affect student attitudes, and the importance of teachers' adopting methods of leading discussion which will enhance the literary experience for young people. Squire and Applebee recently found 52 per cent of all classroom time in secondary English devoted to literature, but highly dominated by teacher lecture and recitation (60). Hoetker, studying the question behavior of selected ninth-grade teachers, found a question asked every 11.8 seconds in average classes and every 5.6 seconds in a slow class! (27). Small wonder that some students do not profit from class discussions of literature.

Levinson reported that the viewing of film versions of short stories, whether shown before or after reading, improves the response of both younger and older readers and of good and poor readers in the junior high school ([illegible]2). Smith demonstrated that the assignment of certain kinds of creative writing tasks prior to the reading of a short story can make a difference in the attitudes developed by students toward the story and can stimulate creative thinking about the story (57).

As a result of four years' work in a center for developing curriculum in English, Steinberg and others recommended inductive teaching which encourages students to make their own discoveries in literature (63). However, LaRocque, defining inductive teaching somewhat more rigorously, reported that a compared group study in teaching figurative language to 211 high school subjects consistently showed inductive teaching to be less effective than deductive teaching (31).

Modification of the overall program in which literature is taught has been suggested by several recent studies. After reviewing modern criticism and the work of specialists in teaching literature, Walker recommended that classroom study include a careful analysis of the work to see what structural relationships exist within the selection (68). The study of structure, reported Walker, broadens the base of literary appreciation by enabling readers to respond not only to its meaning but to the craftsmanship involved in its creation. In an interesting pilot study, Henry and Brown suggested that teachers of English emulate strategies of thinking by explicitly teaching young people to understand and apply methods of mathematics, such as creating a structure of relations among ideas, abstracting, generalizing, and interpreting (25). A pilot analysis of two poems by four groups of students consciously employing such strategies yielded promising results.

A few recent studies advance hypotheses for teaching and testing which require additional investigation. They demand consideration less because of the conclusiveness of their findings than for their potential implications. Britton found that student reactions to particular poems improve with planned rereading of the poems (5). Similar results were reported by Rees and Peterson, who found positive evaluations of poetry associated with familiarity with the poetry, cooperative attitudes, and a factor called "sophistication" (46).

The advantages and disadvantages of extensive and intensive reading have been debated for years, with virtually all studies indicating that extensive reading of literature results in the reading of more books, in the development of more favorable attitudes toward books, and in continued growth in reading skill. In a classic study Coryell found no significant difference in tested achievement in reading of students engaged in intensive and extensive programs (11). LaBrant reported the contributions of free reading to an expansion of reading interests of young people; and in a follow-up study of subjects some twenty-five years later, found that as adults, the subjects who had completed a six-year free reading program were doing significantly more reading than most other groups with which they were compared (29, 30). Norvell matched twenty-four experimental and control classes and reported that students who had programs of extensive reading made small but significantly greater gains in reading ability than did those in more restrictive programs (40). Superior students appeared to progress better than did average students.

Fink and Bogart placed paperback libraries in fifty schools (ten elementary and forty secondary) for a year and reported 62 per cent of all students claimed the collections had increased their personal reading and a majority of teachers felt their method of instruction had changed as a result of the libraries (18).

Handlan, however, found that extensive reading must be guided carefully by the teacher lest young people continue to read at their present level of quality and interest and not progress to more mature experiences (23).

Research thus demonstrates that methods of teaching and conditions of teaching can affect an individual's attitudes toward reading. The attitudes which readers bring to a book and the attitudes which they derive from their reading are intimately related both to the process of reading itself and to the personal qualities of the reader. They affect preferences for reading as much as they color individual response to any selection, and they must be considered carefully by any teacher in planning a literary education for students in secondary schools today.

References

1. Agee, William Hugh. *The Initiation Theme in Selected Modern American Novels of Adolescence* (Unpublished doctoral dissertation) (Tallahassee: Florida State University, 1966), p. 183.
2. Alm, Richard S. *A Study of the Assumptions Concerning Human Experience Underlying Certain Works of Fiction Written for and about Adolescents* (Unpublished doctoral dissertation) (Minneapolis: University of Minnesota, 1954).
3. "Bibliotherapy," *Library Trends,* 11 (October 1961) 97-228.
4. Blount, Nathan S. *The Effect of Selected Junior Novels and Selected Adult Novels on Student Attitudes toward the "Ideal" Novel* (Unpublished doctoral dissertation) (Tallahassee: Florida State University, 1963).
5. Britton, J. N. "Evidence of Improvement in Poetic Judgment," *British Journal of Psychology,* 45 (1954) 196-208.
6. Brown, Pauline. *The Relationship of Attitude and Reading Comprehension to Critical Reading Responses* (Boston: Boston University School of Education, 1966).
7. Carlsen, G. Robert. *Books and the Teen-Age Reader* (New York: Harper and Row, 1967).
8. Carroll, John B. "Vectors of Prose Style," *Style in Language,* Thomas Sebeok, ed. (New York: John Wiley & Sons, Inc., 1960), pp. 283-292.
9. Casper, Rev. Thomas P. *Effects of Junior-Great-Books Programs at the Fifth-Grade Level on Four Intellectual Operations and Certain of Their Component Factors as Defined by J. P. Guilford* (Unpublished doctoral dissertation) (St. Louis: St. Louis University, 1964).
10. Clarke, Edith Scherrer. *Stories about Retarded Readers for Use in the Junior High School* (Unpublished doctoral dissertation) (New York: Columbia University, 1967).
11. Coryell, Nancy G. *An Evaluation of Extensive and Intensive Teaching of*

Literature: A Year's Experiment in the Eleventh Grade, Contributions to Education No. 275 (New York: Teachers College, Columbia University, 1927).

12. Daigh, Charles F. *The Role of Literature in the Education of Youth in the Third Reich* (Unpublished doctoral dissertation) (Urbana: University of Illinois, 1967).
13. Dixon, John *Growth Through English* (Reading, England: National Association for the Teaching of English, 1967).
14. Downey, June, *Creative Imagination: Studies in Psychology of Literature* (London: Kegan Paul, Trench, Trubner, 1929).
15. Dunning, Arthur S. *A Definition of the Role of the Junior Novel Based on Analyses of Thirty Selected Novels* (Unpublished doctoral dissertation) (Tallahassee: Florida State University, 1959).
16. Early, Margaret. "Stages of Growth in Literary Appreciation," *English Journal*, 49 (March 1960) 161-167.
17. Emans, Robert, and Gloria Patyk. "Why Do High School Students Read?" *Journal of Reading*, 10 (February 1967) 300-304.
18. Fink, Richard, and Max Bogart. *Paperbound Books in New Jersey Public Schools* (Trenton: New Jersey State Department of Education, 1965).
19. Forman, Earl. *An Instrument to Evaluate the Literary Appreciation of Adolescents* (Unpublished doctoral dissertation) (Urbana: University of Illinois, 1951).
20. Gallo, Donald R. "Free Reading Book Reports—An Informal Survey of Grade Eleven," *Journal of Reading*, 11 (April 1968) 532-538.
21. Gray, William S. "New Approaches to the Study of Interpretation in Reading," *Journal of Educational Research*, 52 (1958) 65-67.
22. Gunn, Douglas G. "Factors in the Appreciation of Poetry," *British Journal of Educational Psychology*, 21 (June 1951) 96-104.
23. Handlan, Bertha. "The Fallacy of Free Reading," *English Journal*, 25 (April 1946) 182-197.
24. Harding, D. W. "Psychological Processes in the Reading of Fiction," *British Journal of Aesthetics*, 2 (1962) 133-147.
25. Henry, George H., and John A. Brown. *An Inquiry into the Nature of Concept Development within the On-going Classroom Situation*, USOE Project D-067 (Newark: University of Delaware, 1966).
26. Herminghaus, E. G. *The Effect of Bibliotherapy on the Attitudes and Personal and Social Adjustment of a Group of Elementary Children* (Unpublished doctoral dissertation) (Washington, D. C.: George Washington University, 1954).
27. Hoetker, James. "Teacher Questioning Behavior in Nine Junior High School English Classes," *Research in the Teaching of English*, 2 (Fall 1968), 99-106.
28. Jungeblut, Ann, and John H. Coleman. "Reading Content that Interests Seventh, Eighth, and Ninth Grade Students," *Journal of Educational Research*, 9 (1969) 393-401.
29. LaBrant, Lou L. *An Evaluation of the Free Reading in Grade Ten, Eleven, and Twelve* (Columbus: Ohio State University Press, 1936).
30. LaBrant, Lou L. "The Use of Communication Media," *The Guinea Pigs after Twenty Years*, Margaret Willis, ed. (Columbus: Ohio State University, 1961), pp. 127-164.
31. LaRocque, Geraldine E. *The Effectiveness of the Inductive and Deductive Method of Teaching Figurative Language to Eighth Grade Students* (Unpublished doctoral dissertation) (Palo Alto: Stanford University, 1965).
32. Levinson, Elias. *Effects of Motion Pictures on the Response to Narrative, A Study of the Effects of Film Versions of Certain Short Stories on the Response of Junior High School Students* (Unpublished doctoral dissertation) (New York: New York University, 1962).
33. Loban, Walter. "A Study of Social Sensitivity (Sympathy) Among Adolescents," *Journal of Educational Psychology*, 44 (February 1953) 102-112.
34. Lodge, Helen C. "The Influence of the Study of Biography on the Moral Ideology of the Adolescent at the Eighth Grade Level," *Journal of Educational Research*, 50 (December 1956) 241-255.
35. Meckel, Henry C. *An Exploratory*

Study of the Response of Adolescent Pupils to Situations in a Novel (Unpublished doctoral dissertation) (Chicago: University of Chicago, 1946).

36. Meckel, Henry C. "Research on Teaching Composition and Literature," *Handbook of Research on Teaching*, N. L. Gage, ed. (Chicago: Rand McNally, 1963) pp. 966-1006.
37. Muller, Herbert J. *The Uses of English* (New York: Holt, Rinehart and Winston, Inc., 1967).
38. Norvell, G. W. *The Reading Interests of Young People* (Boston: D. C. Heath & Company, 1950).
39. Norvell, G. W. *What Boys and Girls Like To Read* (Morristown, N. J.: Silver Burdett Company, 1958), p. 316.
40. Norvell, G. W. "Wide Individual Reading Compared with the Traditional Plan of Studying Literature," *School Review*, 49 (1941) 603-613.
41. Olson, Arthur V., and Carl L. Rosen. "A Comparison of Reading Interests of Two Populations of Ninth Grade Students," *Adolescence*, I, 4 (Winter 1966/67) 321-326.
42. Peel, E. A. "The Analysis of Preferences," *Research Design and the Teaching of English*, David H. Russell and others, eds. (Champaign, Illinois: National Council of Teachers of English, 1964).
43. "Proceedings of ALA Bibliotherapy Workshop," *AHIL Quarterly*, IV, 4 (Summer 1964) 2-58.
44. Purves, Alan C. "An Examination of the Varieties of Criticism," *College Composition and Communication*, 17 (May 1966) 94-99.
45. Purves, Alan C., and Victoria Rippere. *Elements of Writing about a Literary Work* (Champaign, Illinois: National Council of Teachers of English, 1968).
46. Rees, Richard D., and Darhl M. Peterson. "A Factorial Determination of Points of View in Poetic Evaluation and Their Relation to Various Determinants," *Psychological Reports*, 16 (1965) 31-39.
47. Richards, I. A. *Practical Criticism: A Study in Literary Judgment* (New York: Harcourt, Brace & World, Inc., 1929), p. 362.
48. Robinson, Helen M. "What Research Says to the Teacher of Reading: Reading Interests," *The Reading Teacher*, 8 (1955) 173-177.
49. Rogers, Charlotte. *Individual Differences in Interpretive Responses to Reading Short Stories at the Eleventh Grade Level* (Unpublished doctoral dissertation) (Tucson: University of Arizona, 1965).
50. Rosenblatt, Louise M. *Literature as Exploration* (New York: Noble & Noble, Publishers, Inc., 1968).
51. Russell, David H. "Some Research on the Impact of Reading," *English Journal*, 47 (October 1958) 398-413.
52. Russell, David H., and Caroline Shrodes. "Contributions of Research in Bibliotherapy to the Language Arts Program," *School Review*, 58 (1950) 334-342.
53. Sandefur, J. T., and Jeanette Bigge. *An Exploratory Study of the Effects of Bibliotherapy on the Behavioral Pattern of Adolescents* (Emporia: Kansas State University, 1965).
54. Simpson, Ray H., and Anthony Soares. "Best- and Least-Liked Short Stories in Junior High School," *English Journal* 54 (February 1965) 108-111.
55. Smith, Helen K. "A Survey of Current Reading Interests—In Grades Ten Through Fourteen," *Developing Personal Interest in Reading*, Supplementary Educational Monograph No. 84, Helen M. Robinson, ed. (Chicago: University of Chicago Press, 1950), pp. 65-68.
56. Smith, Nila B., chairman. *Development of Taste in Literature* (Champaign, Illinois: National Council of Teachers of English, 1963).
57. Smith, Richard J. *The Effects of Reading a Short Story for Creative Purpose on Student Attitude and Writing*, Technical Report No. 28 (Madison: Wisconsin Research and Development Center for Cognitive Learning, University of Wisconsin, 1967), p. 29.
58. Squire, James R., ed. *Response to Literature* (Champaign, Illinois: National Council of Teachers of English, 1968).
59. Squire, James R. *The Responses of Adolescents While Reading Four Short Stories* (Champaign, Illinois: National Council of Teachers of English, 1964).
60. Squire, James R., and Roger K. Applebee. *A Study of English Programs in*

Selected High Schools Which Consistently Educate Outstanding Students in English, Cooperative Research Project No. 1994 (Urbana: University of Illinois, 1966), p. 601. *High School English Instruction Today* (New York: Appleton-Century-Crofts, 1968).

61. Squire, James R., and Roger K. Applebee. *A Study of the Teaching of English in Selected British Secondary Schools*, Cooperative Research Project No. 6-1849 (Urbana: University of Illinois, 1968). *Teaching English in the United Kingdom* (Champaign, Illinois: National Council of Teachers of English, 1969).
62. Stanchfield, Jo M. "Reading Interests of Eighth Grade Boys," *The Reading Teacher*, 16 (January 1962) 41-44.
63. Steinberg, Erwin R., and others. "The Inductive Teaching of English," *English Journal*, 55 (February 1966) 139-157.
64. Taba, Hilda. *With Perspective on Human Relations* (Washington, D. C.: American Council on Education, 1955).
65. Tatara, Walter T. "Effects of Novels on Ideas about the Scientist," *Journal of Educational Research*, 58 (1966) 3-9.
66. Terman, L. M., and Margaret Lima. *Children's Reading* (New York: Appleton and Co., 1935).
67. Thorndike, Robert L. *Children's Reading Interests* (New York: Teachers College, Columbia University, 1941).
68. Walker, Jerry L. *An Investigation into Individual Differences and the Structure of Literature* (Unpublished doctoral dissertation) (Detroit: Wayne State University, 1964).
69. Waples, D., and others, *What Reading Does to People* (Chicago: University of Chicago Press, 1940).
70. Whitehead, Frank. "The Attitude of Grammar School Pupils toward Some Novels Commonly Read in School," *British Journal of Educational Research*, 26 (1956) 104-111.
71. Whitman, Robert S. "Significant Reading Experiences of Superior English Students," *Illinois English Bulletin*, 51 (February 1964) 1-24.
72. Williams, E. D., and others. "Tests of Literary Appreciation," *British Journal of Educational Psychology*, 8 (November 1938) 265-284.
73. Wilson, James R. *Responses of College Freshmen to Three Novels* (Champaign, Illinois: National Council of Teachers of English, 1966).
74. Witty, Paul, and others. *A Study of The Interests of Children and Youth*, Cooperative Research Report 367 (Evanston: Northwestern University, 1959).
75. Wolfe, Willavene, and others. *The Critical Reading of Elementary Children*, Cooperative Research Project No. 2612 (Columbus: Ohio State University, 1967).
76. Wollnar, Mary H. *Children's Voluntary Reading as an Expression of Individuality* (New York: Teachers College, Columbia University, 1949).

What Does Research in Reading Reveal—

About Successful Reading Programs?

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IN the decade since 1957, reading instruction in secondary schools has become an accepted goal, though it is still an infrequently achieved one. The growing importance of reading as a part of the secondary school curriculum may be inferred from several sources. One indication is that publishers are putting out more materials for secondary reading classes. (See Thomas Devine's article in this series.) The last decade has seen the publication of at least four professional textbooks on reading in the secondary school (6, 43, 50, 47), two books of readings (86, 36), and several monographs (21, 40, 64). The International Reading Association has added to its publications a periodical for teachers of secondary, college, and adult reading; descriptions of junior and senior high school reading programs appear in almost every issue. Culling the annual proceedings of the International Reading Association for 1960-1966, Summers listed 180 articles related to secondary reading, twenty of them offering descriptions of programs in practice or recommending procedures for setting up such programs (74). In 1967, Dawson compiled from all IRA publications a volume of forty-three articles under the title *Developing High School Reading Programs* (14).

For the first time, the *Review of Educational Research*, in April 1967, devoted a chapter exclusively to reading in the secondary school, in which the author estimated that approximately one-fourth to one-fifth of the total research reported for all levels during the three-year peiod (1963-66) was related to secondary reading. Only a fraction of the studies summarized in this review by Summers could be justified as research on reading programs, however (75).

Further evidence of growth in secondary reading instruction can be found in the number of NDEA Institutes for teachers of reading in junior and senior high schools. Moreover, fifty states at this writing have reading supervisors whose responsibilities extend to Grade 12.

Added impetus has come also from the Elementary and Secondary Education Act, which in supporting plans for improved educational opportunities for the economically disadvantaged, inevitably promotes reading instruction in junior and senior high schools. In the journals of 1966-68, many articles related to reading described how ESEA funds were used in expanding reading services.

The past decade has witnessed increased action on the secondary reading front but not much change in direction. The ultimate goal remains the infusion of reading skills instruction into all school subjects where reading is an important mode of learning. That this is still a distant goal is reflected in the large number of programs in which reading is a scheduled course, an "extra" in the curriculum. That it is still a desirable goal is seen in the many programs which focus on inservice education for teachers in all subject areas.

Changes in direction over the past ten years have been barely perceptible. One expected shift failed to occur. That is, we might have expected that, as terminal students in high school dropped from about 80 per cent in the early 1950s to less than 50 per cent in the middle 1960s, reading improvement programs would have veered toward serving the college-bound. To some degree, this shift has taken place but more often outside the public schools than within. College-bound youth are prepped in reading and study skills in summer camps, college-sponsored programs, and many private reading improvement services. But within public and parochial schools, assisted by ESEA funds, newly developed reading programs are aimed at saving the potential dropout. So the emphasis on remedial, corrective, or special programs remains strong in spite of the fact that most authorities have agreed for some time now that the desired goal is a developmental program that reaches every student, chiefly through subject matter courses.

Research Is Limited

Two kinds of research questions may be raised. The first tries to find out what secondary schools are doing about reading instruction. The second asks how effective are particular programs. Since both questions are hard to answer, it is not surprising that the research is extremely limited, quantitatively as well as qualitatively.

Attempts to estimate current practices depend on an understanding of what is meant by "reading instruction" and "reading programs," terms which are still lacking clear and widely accepted definitions. In surveys by mail, therefore, more confidence can be placed in negative replies. Unfortunately, negative replies are common findings.

In a study reported in the 1957 edition of this monograph, Viox obtained 147 responses to a questionnaire sent to 293 senior high schools in thirty-four states. Fifty-eight per cent of the respondents claimed no reading program of any kind, while 42 per cent said instruction was given in English classes and/or special reading classes.

Not much better results have been obtained in subsequent studies. For example, in a survey of high schools in the Upper Midwest, with an 84 per cent response from a sample of 152 schools, more than a third denied having any reading program. Those that claimed programs offered evidence that only one phase, usually the remedial, was emphasized (69). A study of forty-two Midwestern high schools, undertaken in 1961-62, revealed twenty-seven with some kind of reading instruction, mostly remedial. The author's, or respondents', broad definition of "remedial" is seen in the statistic that in twenty-one of the twenty-seven schools, instruction was given in the regular class period, usually English (11). Peyton and Below queried ninety-five principals in Kentucky high schools and concluded that there is a wide divergence between recognition of need and implementation of a program (61). From a survey of 269 junior high schools in Illinois comes the estimate that slightly more than one-third have a teacher with training in reading methods (7). In all these studies, lack of qualified personnel was cited as the major obstacle.

In 1960, fewer than 20 per cent of the public secondary schools in the state of Illinois outside of Chicago reported having reading improvement programs (33). Grissom classified these into three types: ability-grouped English classes which emphasize reading; special reading classes; schools making multiple provisions. Choosing fifteen of the 107 schools, he visited each to study the operation of the program. His composite picture of these three types of programs provides much specific information on selection of students, scheduling, staff, equipment, and instructional and administrative arrangements.

The status of reading in 158 high schools reputed to be doing excellent work in preparing college-bound students was reported by Squire (72). From observations it was inferred that reading received attention in only 10 per cent of the classrooms. More than half the schools were rated as making "no apparent effort or only ineffective efforts to teach reading as a skill." Of approximately 112 schools analyzed for this part of the report, only ten were ranked high with respect to effectiveness in the teaching of reading. Squire's report corroborates others as to the most prevalent type of program; that is, classes in "remedial" reading were found in somewhat more than one-third of the schools.

Rounding out this dismal picture and confirming the complaints of administrators responding to the questionnaire studies summarized above, the National Council of Teachers of English reported in 1964 that 90 per cent of English teachers do not feel well qualified to teach reading (55).

Evaluation of Programs

Not only are secondary reading programs limited in scope, statistical evidence of their effectiveness is similarly limited. Most studies report students' reading test scores before and after instruction but give few details on the nature of the program and little consideration to variables that may distort findings. (Good descriptions of programs frequently neglect evidence of evaluation.) Moreover, some of the programs reported are so narrow that it is difficult to distinguish them from tests of specific practices, which are summarized elsewhere in this series.

But it is unrealistic to lament the lack of research when the models recommended by sound theory have not yet been put into practice. Far from researching programs, we are still developing them. We are, or should be, in that period of free experimentation which must precede strictly controlled research. At this stage, detailed accounts of promising programs are more useful than reports of gains or losses following a period of vaguely defined instruction. Accordingly, in the summary that follows, we shall draw heavily upon descriptive articles. This summary is organized according to types of programs, ranging from the total developmental program recommended in the professional literature to various compromise programs or fragments of the whole.

The Total Program

Ideally, there might be no reading program at all in the secondary school, if by "program" we mean something visible on the master schedule (20). In a well-run school system, the teaching of reading would proceed smoothly and efficiently from the primary grades, where the beginning skills would be mastered by all, to the intermediate grades, where basic study skills would be applied to reading in the content areas, through the junior and senior high school, where reading skills, habits, and attitudes would be extended and refined as students encounter increasingly complex materials. All instruction in reading would take place in the regularly scheduled subjects of the curriculum. There would be no need for extra reading classes, whether these are conceived of as "developmental" for students at every level of achievement, or as "remedial" or "corrective," since potential reading disabilities would have been diagnosed as early as primary grades and preventive measures applied.

In such an ideal situation, there would be no need for reading teachers, though coordination of reading instruction through the subject areas would require one or more specialists, depending upon the size of the school. The coordinator's chief functions would be to provide continuous inservice education and to evaluate progress of students individually and as groups. Inservice education would include courses, workshops, team planning, and team teaching. Evaluation of students' progress would go far beyond the administration of standardized and informal tests to include study of the amount and quality of voluntary reading and the effects on achievement in all school subjects.

Turning from the ideal to actual practice, we find that schools reaching for a total program include special classes of a corrective as well as developmental nature. No matter how convinced administrators may be of the wisdom of an every-teacher program, few are willing to bypass the special reading classes. In a New York City high school, for example, reading is taught in all English classes and in several subject matter classes, but there is also a corrective course for students two or more years retarded in reading and a tutorial program for those needing individual attention. In this high school, coordination of the developmental program is undertaken by an interdepartmental committee (52).

Similarly, an "all-school reading committee" works with the reading consultant in Nicolet High School (Milwaukee) to strengthen the approach to basic study skills in the subject areas, and this school wide effort is supplemented by a class in Accelerated Reading for college-bound seniors, by individual and small-group tutoring, and by a summer reading skills course (68). In Lakewood High School (Ohio) the extra developmental classes which supplement the integrated program are conducted in the reading center to which students come voluntarily thrice weekly from their study halls (16).

Grades 7 and 10 in San Francisco have planned study skills lessons in an orientation class, and there are special classes for students whose disabilities stem from bilingualism, but basic to the program is the effort to individualize instruction in reading in the content areas (44). The University of Chicago High School, under a reading coordinator, has developed enthusiastic interest on the part of its faculty (23). An experiment with the use of options in the ninth grade curriculum opens the way to an innovative approach to reading instruction. On two days a week, in place of regular academic classes, students may choose eight options, among them several that develop reading and study skills. Options are pursued through independent study, laboratory work, and small-group instruction. The services of the University reading clinics are also offered as an option (3).

For a staff-organized program in Orlando, Florida, each subject area produced units based on reading skills (45). A school wide improvement program in a small high school features vocabulary development in every course, an enterprise in which the total faculty is involved (28). In a junior high school, a nearly total program was achieved through developing special units for mathematics, science, and social studies classes and assigning to homeroom teachers the responsibility for basic reading instruction. A reading clinic was available for the most retarded students, and a reading consultant coordinated the total program (83).

How Effective Are Total Programs?

No one claimed for the programs cited above that total effectiveness had been achieved. Each was a progress report offering at most informal and subjective evaluations. Controlled research embracing the multiple facets of a near-total program has not yet been reported.

Real differences between the programs cited above and those that follow might be hard to discern in actual practice. However, the descriptions of programs mentioned in this section gave major attention to efforts to spread reading instruction into the subject fields. The program descriptions to follow emphasize reading as a separate curricular offering or as part of English.

Developmental Reading Classes

The label *developmental* is used to distinguish reading instruction designed for all students, at every level of achievement, from instruction which is offered only to those who are not reading at expected levels. When reading is taught in subject matter courses, it is *developmental* since instruction supposedly reaches all students. It is *developmental* for the same reason when it is offered in all English classes. The mandated program in all seventh and eighth grades in Pennsylvania is *developmental* since it reaches all students through "extra" reading classes (46). In citing examples in this section, we have also included as *developmental* extra classes set up for average and superior college-bound students.

The case for and against the extra reading class is frequently debated. Those taking the affirmative point out that such classes insure continuity of reading instruction beyond the sixth grade. Continuous development of skills is chancy when left to untrained, if not unwilling, subject matter teachers. Those taking the negative in this debate are alarmed by the very real possibility that the special class will abort attempts to promote schoolwide attention to reading. They point out the artificiality of learning skills out of the context of the subject matter courses where their need can be most easily discerned. On the other hand, an argument for the special class is that intensive practice is desirable and that it needs a laboratory setting and the skills of a trained teacher. There is no reason why the advantages of the extra class cannot be retained while the effort continues to train subject teachers in teaching the application of skills.

More than twenty articles describing special developmental classes were examined, all of them published within the last ten years. Patterns of scheduling are diverse, but similarities are apparent in the materials and methods employed, and in the standardized tests used for pre- and post-evaluations. A few courses are voluntary (5, 84) and take students from study halls (71). Many are short-term: a semester (77, 10, 12, 49), twelve weeks (2, 67), eight weeks (26), six weeks (18), one day per week through the year (48), three times a week for seven weeks (59). Laboratory settings are mentioned frequently, especially where attendance is voluntary (39, 84). Summer reading programs of a developmental nature are common practice (82, 78, 87).

Sometimes classified as developmental programs are special courses, outside the English class, whose main purpose is to increase the amount and quality of voluntary reading. An evening seminar for honors students in Grades 11 and 12 is described by Billings and Paulson (9), and a one-semester elective course based on the principles of individualized reading as described by many elementary reading specialists has stimulated student interest at the University of Iowa High School (4).

Laboratory periods sometimes imply a variety of workbooks, textbooks, and teacher-developed exercises, paperback libraries, pacers, tachistoscopes, and tape recorders for "forced reading" (listening while following printed text), listening skills practice, and oral reading evaluation. Some descriptions of laboratory sessions also mention literature anthologies, magazines, newspapers, and reading films (53). Sometimes, however, the term simply denotes use of published kits of exercises based on materials of graduated difficulty. Typically, instruction focuses on vocabulary development, SQ3R, and similar textbook study plans, work-study skills, comprehension of main ideas and details, with some attention to interpretive and critical reading, and rate of reading (41).

In a nonresearch article, Miller discusses the growth of a developmental program in Sheboygan which began with an elective course for "only top-notch readers" in Grade 9. In the first year, eighteen students were admitted to a full-year course focused on vocabulary development, increased speed and efficiency, and broadening reading interests. Units on effective study habits, on teen-age problems, and newspapers and magazines, were included as well as the reading of four books (*Kon-Tiki*, *The Pearl*, *Arrowsmith*, and *Moby Dick*), and three or four reading projects, apparently individualized. The course was continued for the next two years, still limited to advanced ninth graders. The next step was to organize classes for average as well as advanced readers and to include seventh and eighth graders. Students in Grades 7 and 8 and in Grades 8 and 9 were placed in the same classes. After another year, the program was further expanded to include classes for remedial readers and slow learners. Interest in reading in the senior high school was met by a six weeks' summer course. At the end of five years, a second junior high school was built, and in this school a still broader reading program was developed. Although not evaluated objectively, the program has obviously been studied carefully, and the article presents well-considered opinions of its failures and limitations (53). For many schools a similar pattern of slow expansion, beginning with students most likely to profit from extra instruction, is recommended since it allows careful planning and the development of the teaching staff.

How Effective Are Developmental Classes?

Nasman compared the reading growth of 188 ninth grade students after a six-week course taught by special reading teachers with the achievement of 186 matched students who did not receive the instruction. The experimental group showed very significant gains, though the control group also gained on the posttest. Significant retention of gains was observed on the second posttest seven and one-half months after the start of the program, despite losses on a posttest administered a month earlier. In another phase, 1,127 students in Grades 7, 8, and 9 who had taken the six-week course were studied. Nasman concluded that the program was not equally effective for all three grade levels: the mean growth for Grade 9 was considerably greater. The program was equally valuable for three different ability groups, and boys and girls made equal progress. Comparison of afternoon and morning classes revealed no true differences (54).

Noall undertook the evaluation of a seven-week program which was set up to explore the possibilities of "mass differentiated skills instruction"—that is, teaching a large number of students in the same room at the same time by use of multi-level materials which allow students to progress at their own rates.

The students, 114 eleventh and twelfth graders, met in the school cafeteria after school for an hour three times a week. These students were good readers; their average IQ was 114, their average pretest scores on the Iowa Tests of Educational Development were about the 74th percentile, on the Spitzer Study Skills Test at the 60th percentile, and on the Watson-Glaser Critical Thinking Appraisal at the 77th percentile. Yet mean scores on a second form of these tests were significantly better at the conclusion of the experiment. Since students had volunteered for the program, motivation was on the investigator's side. While the study confirms that in teaching we are likely to achieve what we consciously strive for, this by no means negates the value of the experiment to future program development. It should be of significance to hard-pressed administrators that the teacher who managed this "mass differentiated instruction" was inexperienced, though trained in reading methods and theory (59).

In another study, seventh grade students taking a one-semester course scheduled daily for twenty-five-minute periods in groups of ten or twelve were tested in January immediately following the program and again in May. They made average gains of a year and a half during the instructional period and an additional average gain of about eight-tenths of a grade by the end of the year. As in the previously cited study, no control group was used. Nevertheless, the overall gain of more than two years for students of very average IQ and somewhat below-average reading achievement suggests that the semester course was worthwhile (12).

Positive results are reported for programs for college preparatory students (84, 77, 27, 48), for a twelve-week class for seventh graders (67), and for one-semester courses for Grades 11 and 12 (17). Indeeed, group gains measured by pre- and posttests are to be expected apparently regardless of the quality of instruction between the tests. The absence of control groups in most of these studies makes it impossible to evaluate the real significance of the gains reported. Nevertheless, the objective results we have, with all their limitations and biases, suggest that reading instruction in the secondary school has positive effects.

A few investigators report second thoughts in spite of measured gains. Although Thornton found significant gains in rate for an experimental twelfth grade compared with a control group, he concluded that the program put too much reliance on machines and drill devices (77). Another study, involving two matched groups in Grades 7 to 9, compared the effects of a twenty-week program with and without reading pacers. Both groups made gains which were retained six months later, and the investigator concluded that pacers were not necessary (49).

Developmental Reading as Part of the English Curriculum

High school reading programs are commonly allied to the English curriculum. Sometimes reading instruction is integrated entirely with English, sometimes reading is substituted for English during part of the year or, especially with slow-learning or remedial sections, for the whole year. Such plans have the advantage of adding nothing extra to the curriculum. They suffer the disadvantages of the extra developmental reading classes already cited. In many schools, however, the introduction of reading into the English class, especially when it is done by a competent reading coordinator, is a step closer to the goal of reading in all subject fields than is the developmental reading class which is added to the master schedule.

In this category eighteen programs were found, a few offering statistical evidence, more describing organization and methods. (It should be noted again that many schools have more than one "program" and could be cited in more than one category.) A promising pattern involves reading specialists and English teachers working together. In Centinela Valley, California, a school district comprised of four high schools with an enrollment of approximately six thousand students, a reading teacher is assigned to each high school, which is equipped with two reading laboratories accommodating fifteen students each. All ninth grade English classes spend eight weeks in the laboratories, with the regularly assigned English teacher taking half his class in one laboratory and the reading teacher taking the other half in the second laboratory. (At the beginning of the program, twenty English teachers took a summer course in reading methods at the school district's expense.) The class, working in two sections, follows a concentrated program of reading and study skills. The librarian instructs students in the use of library materials and guides their independent reading for research and recreation. At the end of the eight weeks, students return to their English class and continue to practice the skills learned in the laboratory. On the Nelson Silent Reading Test, used for pre- and post-evaluation, an average gain of one year, eight months has been observed during the six years this plan has been in operation. This program has been described in three articles which offer considerable detail on this and other phases (8, 26, 84).

In Guilderland, New York, the reading specialist scheduled five days with an English teacher and his class every six weeks. The English teacher assisted in analyzing test results, and planning lessons, becoming familiar with the problems of students and the procedures and tools of the reading teacher. In the following five weeks, the English teacher continued on his own the instructional program begun with the specialist's help (34). In another high school, all students substitute a six-week unit in reading taught by the reading specialist and observed by the English teacher (73).

Other articles describe plans in which the reading teacher goes into an English class, especially in Grades 7 to 9, for a period of five or six weeks to teach basic reading and study skills (18), or in which definite periods of time are allotted to instruction in reading by the English teacher (81, 42, 1).

Ramsey reports statistically significant differences for an experimental group of eleventh graders who were taught four basic reading skills (word attack, vocabulary, comprehension, and rate) in regular English classes by teachers who had had no previous training in the teaching of reading. He compared experimental group scores with those of seventy-eight eleventh graders who had received no formal instruction in reading (62).

Reporting on "corrective reading" within the English class, Adams claimed an average growth of 1.88 years in eight months, with eighty-one of 228 students gaining from 2.0 to 5.4 years on pre-post measures (1).

Summers evaluated a program in which five tenth grade English classes were taught reading for a six-week block of time. With each fifty-minute period divided into two sessions of twenty-five minutes each, the reading teacher could work with one group of students while the English teacher supervised the other. Reading gains were statistically significant (76).

The time provided for a study skills program for above-average eleventh graders, in a study reported by Glock and Millman (30), came from the regular English program, two days a week for fifteen weeks. Instruction included practice in rapid reading, skimming, determining the organizational pattern, summarizing, note-taking from recorded lectures, differentiating between details and main ideas, and determining the tone and intent. In addition to rapid-reading practice in class, students had access to a rate-control device for use at home. The forty-one students in the experimental program were compared with a control group, equated on IQ and sex, who attended English class for the full five periods a week. Achievement tests were administered and school grades recorded for three years, following the subjects through freshman year in college. At the college level, the experimental group had higher overall grade averages, except in English, than the control group, but these differences were not significantly different. In fact, no evidence could be found in the eleven measures of reading speed, comprehension, and study skills of superiority of the experimental over the control group. This is a discouraging study in every respect but one: the investigators' willingness to report negative findings. From this carefully controlled study, one can draw a tentative conclusion: don't schedule study skills classes in place of English and require honors students to take them. The authors speculate rightly on how the results might have been altered had the program been voluntary. They might also have questioned the scheduling which took bright eleventh graders out of an English course that may have been far more interesting to them than study skills practice. The plan cited earlier of inviting above average juniors and seniors into an after-school study skills program seems to be a better design for success (59).

Some schools substitute reading instruction for the English course for the entire year. Newman reported such a plan as it was worked out in the Woodrow Wilson Vocational High School in New York City and submitted evidence that retarded readers showed gains exceeding normal expectancy (57).

A somewhat different approach is described by Reeves in an experiment to improve reading among three low eighth grade classes. Here a committee of seven teachers (three in English, three in social studies, and one in science) decided that reading instruction in English classes should also contribute to the work being done in social studies and science. Although the program was deemed successful in its first year, subsequent staff changes caused reorganization and loss of the team-teaching aspects that had been developed during the first year (63).

A detailed description of a junior high program in which reading is integrated with English and social studies, through the same teacher teaching all three, is described by Ellis. In this program, periods of English and reading ranged from five to fourteen per week depending on grade and level. Materials were organized according to reading difficulty for each grade level. The program was evaluated in a number of ways: informal diagnosis of reading skills, examination of reading records and book reporting activities, and observations of teachers in all content fields (22).

How Effective Are Such Programs?

The opinions, subjective evaluations, pre-post testing, and even the more scientifically controlled research which we have quoted are insubstantial bases on which to pronounce judgment on the effectiveness of developmental reading instruction as part of the English program. Common sense suggests that plans for teaching reading as a part of English are a way to begin, not ends in themselves.

Remedial or Corrective Programs

The programs described under this heading differ from those cited previously in that they treat the most severely retarded readers in clinic settings or in corrective classes. Because the terms *remedial* and *corrective* are often loosely used in discussions of high school reading, this category includes descriptions of programs for students whose reading achievement is depressed for a variety of reasons. Not all remedial reading specialists would recognize these programs or the students they serve as remedial in the sense of having extreme difficulty with decoding processes in spite of having both the opportunity to learn and the mental ability to do so.

So-called remedial programs, frequently designated for students reading "two or more years below grade level," were the earliest approaches to secondary reading. They have been disparaged as uneconomical, exclusive, and ill-timed. Occasionally, they have been tolerated by the opinion-makers as a wedge-in-the-door approach, of value only if they lead to broader programs. Yet *remedial* has persisted as a watchword in secondary reading, and remedial-type programs have not lost ground. One described in 1957 had been in operation since 1935 (51). More recently remedial programs have flourished as a result of ESEA Title I with its emphasis on preventing dropouts.

Many remedial or corrective programs are specifically designed for culturally disadvantaged youth, delinquent, and delinquency-prone adolescents (24, 32, 37, 38). Programs in several New York City high schools (29, 80, 13, 31, 85, 25), Detroit (65), Washington (35), and San Francisco (19) have been described, all reporting successes based on various criteria. One of the most interesting of these describes reading instruction in an industrial arts setting and offers twenty-five techniques for improving word recognition and comprehension skills which can be employed in connection with industrial arts (25).

Remedial instruction has been described as excellent classroom methods applied to individuals at the precise points of weakness. Such instruction is based on thorough diagnosis and is characterized by flexibility of methods (60). Materials are often designed by teachers to meet individual interests and needs, but in the programs examined there is considerable dependence upon commercial materials that are also used in developmental classes. In the two programs described by Fader, students begin with writing or copying and they are encouraged to read whatever interests them in magazines and paperbacks (24).

How Effective Are Remedial Programs?

Turner reports the successes achieved by Grade 7 students with IQ's above 90 who were two or more years retarded after one semester program of daily instruction (79). Another group of seventh graders in Rockford, Illinois, raised their median reading score from 5.1 to 6.3 after a period of instruction featuring standard commercial materials and many teacher-devised exercises, especially word games (88).

One program for delinquent boys offered five hours daily of completely individualized instruction in all academic subjects. After six months, some pupils had gained as much as four years in reading achievement test scores; some showed no increase (32).

Gold compared the effectiveness of individualized reading (seeking, self-selection, and pacing) versus group methods, using as subjects the forty lowest achievers among four hundred tenth graders. The results gave no decisive advantage to either program (31). In the Washington program reported by Grotberg, 35 Negro boys in Grade 9 received three fifty-minute sessions a week for twelve weeks. The mean gain on total reading scores at the end of the program was 1.5 years (35).

Teacher Education

Schools that are working their way toward a total program are much concerned with the inservice education of teachers, those who will instruct special reading classes and those who will integrate reading and study skills instruction with their subject matter. For administrators and consultants looking for a new idea, Niles presents a full range of possible approaches to inservice education (58). Remedial and corrective programs often serve as laboratories for training teachers in special reading methods (70, 56, 80).

Inservice programs are seldom "researched," but a number of recent articles have described approaches to teacher education designed to alleviate the shortage in secondary reading personnel. Promising programs release teachers from classes, often to observe and work in a reading clinic (66), to attend lectures and demonstrations by visiting consultants, to examine materials, to participate in "make-it, take-it" workshops, and study groups. Noteworthy in the five stages of professional development undertaken by the Columbus, Ohio, schools is the high degree of teacher involvement achieved through their voluntary participation and through their planning themselves many phases of the program (15).

Improving the reading of secondary school students requires administrative flair and flexibility, quality in instructional materials and arrangements, students who understand what learning is all about, and, most of all, highly motivated and skillful teachers. The best reading programs in secondary schools may be the least obtrusive, but in these best programs what will be most evident is the competency of all teachers to instruct students in how to read and study in particular subjects.

References

1. Adams, W. Royce. "Turning a 'Dumping Ground' Into an Effective Reading Program," *Journal of Reading*, 8 (May 1965) 396-401.
2. Anderson, J. A. "Seventh Grade Reading Program," *Bulletin of the National Association of Secondary School Principals*, 41 (February 1957) 172-177.
3. Andreson, Oliver S. "An Experiment in Class Organization for High School Freshmen," *Improvement of Reading Through Classroom Practice*, International Reading Association Conference Proceedings, J. Allen Figurel, ed. (Newark, Delaware: The Association, 1964), pp. 57-58.
4. Appleby, Bruce, and J W. Conner. "Well, What Did You Think of It?" *English Journal*, 54 (October 1965) 606-612.
5. Atherley, R., and M. D. Rich. "A Functioning Study Clinic," *Bulletin of the National Association of Secondary School Principals*, 49 (January 1965) 78-82.
6. Bamman, Henry A., Ursula Hogan, and Charles E. Green. *Reading Instruction in the Secondary School* (New York: Longmans, Green and Co., 1961).
7. Baughman, Dale M. "Special Reading Instruction in the Junior High School," *Clearing House*, 35 (March 1961) 394.
8. Berkey, Sally, and Irwin H. Fields, "Reading and Study Skills Program," *Journal of Secondary Education*, 36 (April 1961) 197-202.
9. Billings, Jane K., and Joan A. Paulson. "Honors Reading Program in a Senior High School," *English Journal*, 54 (May 1965) 425-428.
10. Brueckman, Elizabeth. "Advanced Reading Program—Taft High School," *Journal of Developmental Reading*, 4 (Summer 1961) 228-238.
11. Cawelti, Gordon L. "Reading Improvement Programs in Selected Midwestern High Schools," *The Reading Teacher*, 17 (September 1963) 36-37.
12. Cawley, John F., Jerry Chaffin, and Herbert Brunning. "An Evaluation of a Junior High School Reading Improvement Program," *Journal of Reading*, 9 (October 1965) 26-29.
13. Cohn, Stella M. "Organizing and Administering Public School Reading Clinics," *Reading and Inquiry*, International Reading Association Conference Proceedings, J. Allen Figurel, ed. (Newark, Delaware: The Association, 1965), pp. 224-226.
14. Dawson, Mildred. *Developing High School Reading Programs* (Newark, Delaware: International Reading Association, 1967).

15. Denney, Patti. "Starting from Scratch," *Journal of Reading,* 11 (January 1968) 271-275.
16. DiBiasio, Anthony J., Jr. "Developmental Reading at Lakewood High School," *Journal of Developmental Reading,* 6 (Autumn 1962) 67-68.
17. Dobrin, Ruth M. "The Massapequa Story," *Journal of Developmental Reading,* 4 (Spring 1961) 159-172.
18. Downs, S. John. "An Attack on Reading Problems," *English Journal,* 51 (December 1962) 645-647.
19. Duggins, James H. "Reading and Social Difference," *English Journal,* 54 (April 1965) 284-288.
20. Early, Margaret J. "Reading: In and Out of the English Curriculum," *Bulletin of the National Association of Secondary School Principals,* 51 (November 1967) 47-59.
21. Early, Margaret J., ed. *Perspectives in Reading, No. 2, Reading Instruction in the Secondary School* (Newark, Delaware: International Reading Association, 1964).
22. Ellis, U. Berkley. "Developmental Reading in Junior High School," *Journal of Developmental Reading,* 6 (Autumn 1962) 41-49.
23. Erickson, Robert, and Ellen Lamar Thomas. "Art Class Book Collection Promotes Better Reading," *Journal of Reading,* 11 (February 1968) 333-336.
24. Fader, Daniel. *Hooked on Books* (New York: Berkley Publishing Corporation, 1966).
25. Ferrerio, A. J. "Use of the Industrial Arts in the Remedial Reading Program," *High Points,* 40 (May 1958) 58-61.
26. Fields, Irwin H. "Corrective Reading at Hawthorne High School," *Journal of Reading,* 9 (January 1966) 182-185.
27. Freed, Ruth. "Developing a High School Reading Laboratory," *Journal of Secondary Education,* 40 (November 1965) 303-309.
28. French, John, Melvin Donaho, and Edith Grotberg. "Small School in Beecher, Illinois, Makes Big Stride," *Bulletin of the National Association of Secondary School Principals,* 43 (January 1959) 84-98.
29. Gittlitz, M. R. "Functional Program for High School Remedial Reading," *High Points,* 39 (October 1957) 8-15.
30. Glock, Marvin, and Jason Millman. "Evaluation of a Study Skills Program for Above-Average High School Pupils," *Journal of Developmental Reading,* 7 (Summer 1964) 283-289.
31. Gold, Lawrence. "A Comparative Study of Individualized and Group Reading Instruction with Tenth Grade Underachievers in Reading," *Improvement of Reading Through Classroom Practice,* International Reading Association Conference Proceedings, J. Allen Figurel, ed. (Newark, Delaware: The Association, 1964), pp. 102-104.
32. Goltz, Charles R. "Individualized Remedial Reading for Boys in Trouble," *The Reading Teacher,* 19 (February 1966) 364-369.
33. Grissom, Loren V. "Characteristics of Successful Reading Improvement Programs," *English Journal,* 50 (October 1961) 461-464.
34. Groomes, Donald L. "The Implementation of an All-School Reading Program," *English Journal,* 55 (December 1966) 1191-1192.
35. Grotberg, Edith H. "Washington Program in Action," *Education,* 85 (April 1965) 490-494.
36. Hafner, Lawrence E. *Improving Reading in Secondary Schools* (New York: The Macmillan Company, 1967).
37. Hall, Nason E., and Gordon P. Waldo. "Remedial Reading for the Disadvantaged," *Journal of Reading,* 11 (November 1967) 81-92.
38. Hall, Nason E. "Saving the Trouble Prone," *NEA Journal,* 54 (April 1965) 26-28.
39. Hegman, Marian. "Developmental Reading Laboratories," *Journal of Developmental Reading,* 6 (Autumn 1962) 64-68.
40. Herber, Harold L. *Perspectives in Reading, No. 4, Developing Study Skills in Secondary Schools* (Newark, Delaware: International Reading Association, 1964).
41. Jan-Tausch, Evelyn. "Teaching Developmental Reading in the Secondary School," *Reading Instruction in the Secondary School, Perspectives No. 2* (Newark, Delaware: International Reading Association, 1964), pp. 45-47.
42. Johnson, Laoz W. "Improving Reading

in Butte County High Schools," *Clearing House,* 32 (December 1957) 207-211.

43. Karlin, Robert. *Teaching Reading in High School* (Indianapolis: The Bobbs-Merrill Co., Inc., 1964).
44. Kent, Tennessee, and Morris Williams. "What's Happening in San Francisco," *The Reading Teacher,* 11 (April 1958) 217-223.
45. Kipp, R. E. "Curriculum Improvement in Reading in the High School," *Bulletin of the National Association of Secondary School Principals,* 42 (October 1958) 85-87.
46. Madeira, Sheldon. "Pennsylvania's Mandated Reading Program," *Journal of Developmental Reading,* 5 (Summer 1962) 221-226.
47. Marksheffel, Ned D. *Better Reading in the Secondary School* (New York: The Ronald Press Company, 1966).
48. Marquis, Bettylee F. "Developmental Reading, New Albany High School," *Journal of Developmental Reading,* 7 (Autumn 1963) 58-62.
49. Martens, Mary. "The Role of a Pacer in Improving Comprehension," *Journal of Developmental Reading,* 4 (Winter 1961) 135-139.
50. Massey, Will J., and Virginia D. Moore. *Helping High School Students To Read Better* (New York: Holt, Rinehart and Winston, Inc., 1965).
51. Mathewson, Angell, and Harry R. Michelson. "The Nature and Worth of a Program of Remedial Reading," *Bulletin of the National Association of Secondary School Principals,* 41 (September 1957) 83-89.
52. Mersand, Joseph. "The Reading Program in Jamaica High School," *PTA Beacon,* 15 (December 1966) 1.
53. Miller, Dwight K. "Junior High School Reading Programs," *Clearing House,* 37 (October 1962) 86-90.
54. Nasman, John G. "A Study of a Reading Improvement Program in the Junior High School," *Elementary English,* 42 (April 1966) 383-385.
55. National Council of Teachers of English. *The National Interest and the Continuing Education of Teachers of English* (Champaign, Illinois: National Council of Teachers of English, 1964).
56. Neville, K. "Results of a Remedial Reading Program at the Secondary Level," *Claremont College Reading Conference,* 1959, pp. 55-56.
57. Newman, Harold. "Remedial Reading Program," *High Points,* 47 (January 1965) 31-40.
58. Niles, Olive S. "Systemwide In-Service Programs in Reading," *The Reading Teacher,* 19 (March 1966) 424-428.
59. Noall, Mabel S. "Automatic Teaching of Reading Skills in High School," *Journal of Education,* 143 (February 1961) 3-73.
60. Penty, Ruth C. "Remedial Reading Pays in Junior High School," *Education,* 81 (February 1961) 277-280.
61. Peyton, James, and Russell Below. "The Need for Reading Instruction in Kentucky High Schools," *School Service Report,* 6 (October 1965) 2-7.
62. Ramsey, Wallace. "An Experiment in Teaching Reading in High School English Classes," *English Journal,* 48 (November 1957) 495-500.
63. Reeves, Ruth E. "Experiment in Improving Reading in the Junior High School." *English Journal,* 49 (January 1958) 15-20.
64. Robinson, H. Alan, and Sidney J. Rauch. *Perspectives in Reading, No. 6, Corrective Reading in the High School Classroom* (Newark, Delaware: International Reading Association, 1966).
65. Ross, Frank E. "For the Disadvantaged Student—A Program That Swings," *English Journal,* 54 (April 1965) 280-283.
66. Sawyer, Rita, and Lucille Taylor. "Evaluating Teacher Standing in Effective Reading Instruction," *Journal of Reading,* 11 (March 1968).
67. Schiavone, James. "A Seventh Grade Reading Enrichment Program," *Journal of Developmental Reading,* 3 (Winter 1960) 106-114.
68. Severson, Eileen. "A Reading Program for High School Students," *The Reading Teacher,* 16 (November 1962) 103-106.
69. Simmons, John S. "The Scope of the Reading Program for Secondary Schools," *The Reading Teacher,* 17 (September 1963) 31-35.
70. Slobodian, June. "Reading Center Program in Action," *Educational Leadership,* 22 (March 1965) 386-389.

71. Snap, Alfred H. "Arlington High School Reading Improvement Program," *Journal of Developmental Reading*, 4 (Summer 1961) 275-279.
72. Squire, James R. "Reading in American High Schools Today," *Reading and Inquiry*, International Reading Association Conference Proceedings, J. Allen Figurel, ed. (Newark, Delaware: The Association, 1964), pp. 468-472.
73. Strang, Ruth. "Progress in Teaching of Reading in High School and College," *The Reading Teacher*, 16 (December 1962) 170-177.
74. Summers, Edward G. The IRA Conference Proceedings Reports on Secondary Reading, ERIC-CRIER *Reading Review Series*, Vol. 1, Biblio. 3 (September 1967) 28 pp.
75. Summers, Edward G. "Reading in the Secondary School," *Review of Educational Research*, 37 (April 1967) 134-151.
76. Summers, Edward G. "Evaluation of Gains in a Secondary Reading Laboratory," *The Reading Teacher*, 17 (January 1964) 255-259.
77. Thornton, Cecil. "Two High School Reading Improvement Programs," *Journal of Developmental Reading*, 3 (Winter 1960) 115-222.
78. Tremonti, Joseph B. "Reading Programs at Dallas," *Journal of Developmental Reading*, 7 (Autumn 1963) 69-71.
79. Turner, Carla S. "Remedial Reading Pays Dividends in the Junior High," *English Journal*, 48 (March 1959) 136-140, 153.
80. Umans, Shelley. *New Trends in Reading Instruction* (New York: Bureau of Publications, Teachers College, Columbia University, 1963).
81. Urbas, Raymond, and Marjorie Dummett. "Reading and Research in Retrospect," *Journal of Developmental Reading*, 7 (Spring 1964) 213-214.
82. Viox, Ruth G. "Setting Up a Junior High School Summer Reading Improvement Program," *The Reading Teacher*, 17 (September 1963) 38-41.
83. Vogel, Frances X. "The Skiles Program for Reading Improvement," *Clearing House*, 35 (February 1961) 331-335.
84. Wamba, D. E. "Reading in High School: Some Programs in Action," *Claremont College Reading Conference*, 1961, pp. 123-131.
85. Weisman, L. "How to Organize a Full-Time Junior High School Reading Program," *High Points*, 39 (October 1957).
86. Weiss, M. Jerry. *Reading in the Secondary Schools* (New York: The Odyssey Press, Inc., 1961).
87. Williams, Jack W. "High School Summer Reading Classes," *California Journal of Secondary Education*, 33 (March 1958) 141-142.
88. Witt, Frank. "Remedial Reading in the Junior High School: A Practical Report," *Elementary English*, 36 (January 1959) 35-41.

What Does Research in Reading Reveal—

About Practices in Teaching Reading?

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THE present article is a supplement to that which appeared in the *English Journal* of November 1957. Because of linguistic and cognitive developments which have affected research and theory in the field of reading in the past few years, it seems unwise to attempt a repetition of the earlier report. The present article will be confined to those events which, in the writer's opinion, promise to make the most dramatic difference in practice.

The status of practice in the field was reviewed by James Squire and Roger Applebee (56) in a report in 1966 on 158 selected high schools which consistently educate outstanding students of English. They found that teaching methods showed little variation, that there was little innovation or experimentation, and that there was less use of audiovisual aids than availability seemed to warrant. Reading programs appeared to lack soundness, purpose, organization, and impact. Slow learners and non-college-bound students seldom received enough attention.

In the past ten years, on the other hand, there has been an explosion of new research relevant to reading. The well-publicized study by Holmes (32) has suggested the tremendous importance of experience as a preface to reading. Bloom and others (9) have produced their taxonomy of educational objectives. Guilford (28) has reported his theoretical construct of the intellect. And a number of linguists have come forth with theories, materials, and practical ideas for the teaching of reading.

The organization of the 1957 report had been in terms of vocabulary, comprehension, and speed. These dimensions were now both too gross and too unrelated in treatment to represent the newer insights into the dynamics of the reading process.

The present report is divided into parts representing activities in the reading process, many of which are simultaneous in occurrence, as well as interdependent. They are:

Word Recognition (including sight recognition and analysis)
Analysis of Sentence Structure
Determination of Word Meanings
Determination of Sentence Meanings
Determination of Sentence Functions
Determination of Meanings of Larger Units of Composition

Determination of Function of Larger Units of Composition
Evaluation and Interpretation of Ideas
Use of Ideas

While each of these will be treated in turn, each has a bearing on the others. In fact, the major message of the newer knowledge is the relativity that pervades all language and language-related activities. It should be reflected also in our teaching.

Word Recognition: Sight Words

Recognition of words as wholes is not the immediate result of a first encounter (23). Apparently it is the result of a number of encounters in contexts which require the refining of observation while they permit more and more rapid recognition, until it would be impossible to say that one had studied every letter in sequence in the time taken for reading the word. Obviously, we could not read so rapidly as some of us do if we were not pattern-conscious (as well as meaning-conscious) in relation to words, phrases, and sentences.

Word meanings affect the ease or difficulty of learning word forms. Walker (67) in a study of nouns and verbs found that, while usage frequency had some effect on retention by seventy-two high school freshmen boys, concrete nouns seemed to be much easier to recall than either abstract nouns or verbs. It follows that more attention needs to be given to the learning of abstract nouns and to verbs than to forms which represent concrete ideas.

Marianne Frostig (27) has identified several kinds of visual perception required in the observation of forms, one or more of which may be deficient in the case of a retarded reader, and capable of improvement by exercise. However, the student who can already recognize a variety of words, no matter how simple they may be, has shown that he can achieve the recognition of forms. His problem may be more a need for application of techniques of learning words —techniques that work for him—and motivation to apply himself, rather than specific deficiencies in perception.

C. C. Fries (25) has promoted the idea of having students learn whole words by means of noting their contrastive feature. With an established pattern contrast such as *pet: pat; met: mat; set:* —, the student can derive *sat*. The application of this technique is limited to regularly spelled words.

Some programmed materials use the presentation of a word in association with a picture, and the gradual establishment of consciousness of the parts in relation to the whole by the omission of parts, to be filled in by the student: *cat*; *ca* , *c t*, *at*, —. The cloze procedure (29), which is the omission of a word or word-part to be supplied by the student, has shown itself to be a useful testing and teaching device. As a follow-up of the *cat* word-parts omission, the student can insert *cat* and other words in appropriate places in the context. In this way the student is required to associate meaning and form.

Word Recognition: Form Analysis

May Hill Arbuthnot (2) has written that "Printer's ink is the embalming fluid of poetry," expressing figuratively what linguists are saying to reading teachers: that the written form of English words is an approximation of the sounds of those words, at best; that the spoken word is the living form (25). Thus, although *lamb* is spelled with a *b*, it is correctly pronounced as /lam/. Only when the *b* initiates the second syllable in *lambent* does the *b* produce a sound in this sequence of letters. *Lambkin* and *lambda* are examples of the silent *b* condition, with the *-mb* completing the first syllable.

The student must recall the spoken form in order to be sure of the sound and stress represented by the printed form. If he has never heard the word, he has to make informed guesses based upon similar word patterns.

Basic to the ability to evoke the sound of an English word is the ability to discriminate and produce the sounds of English. Wepman's test of auditory discrimination (71) yields data on the student's ability to notice such differences. But to know which sounds the student does not discriminate is not always enough, for the question is, "Why does he not discriminate?" Treatment will be different according to the answer.

Lado (36) and Fries (25) have shown the efficacy of teaching to the need in the case of dialect or foreign speech. Foreign language speakers tend to substitute for an English sound in a word the sound most like it in their own language or the sound in their own language which usually holds that position in relation to other sounds in the word. So some speakers say *so* for *show*, *lather* for *ladder*. In Spanish, *-rd* is nonexistent as an ending; hence *card* becomes *car*. In the same language, *st-* never initiates a word without a vowel before it; thus, *star* becomes *estar*.

Labov (35) in his study of a Harlem Negro dialect has shown how dialect can increase the number of homonyms in the spoken language, with consequent confusion in the observation of the written language, and a great dependence upon context. The omission of *r*'s makes homonyms of *guard* and *god*. *Yeah* rhymes with *fair*, *idea*, and *fear*. The omission of *l*'s creates the homonyms *toll* and *toe*, *help* and *hep*, *fault* and *fought*. Final clusters tend to lose the final *-t,-d,-s*, and *-z* sounds. *Pass*, *passed*, and *past* are all pronounced */pas/*. Final consonants *-t,-d,-g*, and *-k* are weak or missing, while *-m* and *-n* are nasalized. Voiced final *-th* becomes *-v*, and unvoiced final *-th* becomes *-f*. *E* and *i* are not distinguished before nasals (*pin*, *pen=pi (n)*.

Initial consonants tend to be pronounced as in standard English except for the *d* substitution for *th-* and the substitution in certain clusters, as in *stream* (pronounced *scream*). The plural form of a word ending in *-st* deviates from the standard English addition of */s/:* the word *test*, pronounced */tes/*, follows the rule which applies to *bus (buses)* and becomes *testes*. Labov suggests that the teacher will have to treat omissions of letter sounds much as he does the silent letter in standard English, stressing the different spellings for the different meanings intended.

He makes the very important point that the student may not hear the difference between his pronunciation of the word and the teacher's pronunciation of it. Mere correction does not do the trick. Pointed speech and hearing exercises may.

Dialect is spoken in a setting which supports identification of the specific meaning intended, whereas printed material demands the fabrication of setting from the print. Essentially, we either make the learning of reading harder by trying to teach it from the dialect, or give the dialect speaker an equal chance with the standard English speaker by first helping him master the spoken standard English substitutes for the dialect deviations. Doubtless the poor academic performance of some Negro dialect speakers can be traced at least in part to this initial handicap. The solution on the secondary level is to give special attention to word endings and letter-sound omissions, with much emphasis upon speech. This is not to suggest that all reading be oral.

The Labov study simply illustrates a much larger problem: that of meeting the needs of dialect speakers of all sections of the country, and the needs of foreign language speakers learning English (53).

One of the aids students unconsciously use in the solution of polysyllabic words is the knowledge of the patterns of letters usual in the English language. In solving the word *fitful*, the student accustomed to the visual patterns of English knows that *t* is not followed by *f* in the same syllable. Therefore, he divides the word after *t* and before *f*. He can do this whether or not he knows *-ful* as a suffix. Obviously, students of foreign language background or students vastly inexperienced in reading English have not developed this skill.

Looking at the word as a pattern instead of as a sequence of single letters, the student can avoid the blending pitfall. He can determine the sound of *a* in the closed syllable *cat*, and associate it with both consonants: *ca-at*, instead of inserting unrelated noises: *kuh-at* or *ka-tuh*.

Sound relationships within monosyllabic words have been explored by Cassidy (17), who shows the mathematical possibility of the occurrence of certain sound patterns within English words. While his suggestions are made in relation to the development of a lexicon organized by sound patterns rather than by alphabetical order, they may be valuable to the teacher and students who wish to learn by discovery.

The patterns of vowels and consonants (VC) which he lists represent sounds, not letters, so that *fast* and *taste* are both of the pattern CVCC; and since *ch* represents the sounds *t* and *sh*, the word *crunch* has the pattern CCVCCC. By possible frequencies (not actual count), there are more than eight thousand opportunities in the language, according to Cassidy, for the occurrence of the pattern CVCC (*fast*), 6,000 for CCVC (*step*), 4,000 for CVC (*pit*), 3,000 for CCCVCC (squirt), and more than 1,000 for CCVCCC (*crunch*), CCCVC (*splash*), CVCCC (*wasps*), and CVVC (*boil*). Other patterns are of less frequency.

He also lists the vowels and consonants which can be final or initial, and consonant clusters which can be final or initial. He further suggests a grid somewhat comparable to the syllabaries used extensively in some countries, except that this one contains complete words. For example, his grid for the CV sound combination includes *dee day do doe daw da*, and *he hay who hoe haw ha*. This is a way to see how many English words there are for a particular consonant sound in combination with the possible (in this case single) vowel sounds. Imposed upon the students, it can become a meaningless ritual. Developed by students, it can become an impressive discovery (13).

In somewhat similar vein, Fries (25) has proposed exploration of CVC patterns. Given the pattern P–l, and adding diphthongs to the vowel possibilities, the student can produce *pail* and *pale*, *peel* and *peal*, *pile*, *pole* and *poll*, *pule*, *pal*, *pell*, *pill*, *poll* (parrot), *pul* (pit), *paul*, *pull*, and *pool*. There is no *powl* or *poil*. This activity yields awareness of variant English spellings for the same sounds, while it designates openings for new words in the language. The next rocket might be named *powl*—a pow with a howl.

The pronunciation of letters is a matter of relativity. In the sentence *The bear lunged at the tourist*, the *th* in *the* could be voiced or unvoiced. Only the student's experience with the spoken word assures him of the voiced sound. The *e* in *the* could be long or schwa, depending upon the beginning sound of the next word, or upon the stress (It is *the* best.).

The word *bear* could be pronounced *beer*, *bare*, *bur*, or *bar*. A student who did not know it as a sight word would have to read farther before deciding on the pronunciation:

The _____ branch = bare.
The _____ barrel polka = beer.
The _____ stuck to his clothing = bur.
The _____ was closed = bar.
The _____ can lunge = bear.

Lunged could have a hard *g*, except that bears do not lung anything. The *e* sound in *lunged* is omitted, and the *d* is pronounced as it is spelled because of the preceding *g* sound.

Pronunciation is also a matter of history, as in the case of *tourist*. The pronunciation of *ou* could not be predicted by a student unfamiliar with *tour*, which retains its French spelling.

Far from being a crutch to be shunned, the use of context is, in some instances, as important to the revitalization of the spoken word as it is to word meaning.

For many years teachers have had some faith in the utility of phonic generalizations. Burmeister (15) reported the findings of seven studies showing the relative dependability and the extent of utility of phonic generalizations. Clymer (19) had found eighteen of high utility, but with many exceptions. Emans (24) and Bailey (5) largely supported his evidence.

The findings by Hanna, Hanna, Hodges, and Rudorf (30) on 17,310 words in a computerized study showed that the spelling of words is subject to several factors: phonological, morphological, and syntactical. The use of phonic generalizations would be less discouraging if they were applied in sequence rather than alone. For example, when *ea* is followed by other consonants than *r*, it probably represents either the long or the short *e* sound; when followed by *r*, it may in addition be sounded as in *hearth* or *heard*. Burmeister (15) proposed that in words like *have* and *rave*, the student be told that the *e* usually is silent and the preceding vowel long or short, and that the long sound should be tried first.

When followed by *r* plus consonant plus silent *e*, as in *terse*, *purse*, *sparse*, *horse*, the preceding vowel ordinarily has the sound it would have if the word ended with the *r*. Weir (70) investigated the effect of environmental factors on the sound of *e* in *er*. In *term*, where it is followed by a consonant; in *experiment*, where it is followed by *i*, and a consonant, or *heresy*, where it is followed by *e* and a consonant; in *experience*, where it is followed by *ie*, or *period*, where it is followed by *io*; and in *her*, where it ends the word. As some of the newer findings on spelling and pronunciation are released, English teachers will be able to be much more helpful to their students, and the task of decoding the printed word will be more rewarding. We still, however, must think in terms of how much the rules are worth.

Syllabication has been torn by strife between lexicographers who divide words by structure, and linguists who divide them by pronunciation. *Expect* is a case in point. While it is necessary to divide as in the dictionary between the *x* and *p* in order to see that the first *e* is in a closed syllable and therefore short, the pronunciation of the word divides between the *k* and *s* sounds: *ek spect*. For some time it has been the practice to teach, for purposes of determining vowel sounds in pronunciation units, the following divisions: *la bor*, *lad der*, *lit tle*, *mas ter*, *mail man*, *look ing*, *ex pect*, *an chor*. *Labor* and *mailman* tend to be pronounced as they are divided above. For the others, however, the students must learn to shift for pronunciation: *la (d)der*, *li (t)tle*, *ma ster*, *loo king*, *ek spect*, *ang ker*. The teacher must literally "play it by ear" in regions in which the standard pronunciation is *lit (t) l*.

Venezky (66) in a computerized study of 20,000 most common English words pointed out that *a* tends to be short when followed by a final consonant or series of consonants, as in *rat* and *annals*. The long *a* occurs in *rate*, *anal*, and *sane*. "What must be acquired," he stated (66: p. 103), "for the proper pronunciation of *a* is the ability to differentiate the environments and suffixes; final consonant vs. consonant plus final *e* (*rat*: *rate*), double medial consonant vs. single medial consonant (*annals*: *anal*), and the base form vs. particular suffixed forms (*sane: sanity*)." He went on to say that he believes a differentiation approach will yield more understanding of the conditions controlling the sound of *a* than will separate treatments of *rat: bat: sat* and *rate*: *bate*: *sate*. He proposes *rat*: *rate*, *mat*: *mate*. In this view he parts company with the authors of a good deal of currently used linguistic material.

The discovery method such as described above, in which the student may derive certain principles from an observed pattern, continues to have support in the research in teaching methods, while it does have the drawback of being based upon limited data. Burmeister found both inductive and deductive approaches effective with eighth and ninth graders (14).

Sentence Structure

It is surely true that sentence structure has something to do with the reading comprehension of sentences. The questions are whether specific training in the recognition of sentence structure is useful, what form it should take, and for whom it should be. One handicap is that we still have no instrument which measures kinds of comprehension and which also takes the critical points of structure important to the answers and asks the meaning of those.

Beaver (8) collected mistakes in oral reading, some of which involved changes of meaning: The sentence, "I gave my sister to you to protect," was read, "I gave my sister to protect you." Word order is an important clue to meaning in English sentences. Misreading of order might well be followed by a discussion of the change in meaning which it precipitates.

Many children enter school with awareness of the basic sentence types in English (61, 41). They do not need ear training for this purpose. But even in the secondary school there are many youngsters whose backgrounds have not supported the signals to English structure.

Labov (35) found that when Harlem Negro boys, ages ten to seventeen, were asked to read the sentence, "When I passed by, I read the posters," most of them read *passed* as *pass*, and pronounced *read* as *reed*, showing that they not only failed to read the ending of *passed* but failed to get its signal to tense. Others misread *passed* but clearly caught the signal of *-ed*, reading *read* as *red*. Labov pointed out that the teacher who merely rereads the sentence according to standard English is wasting his time if the student cannot hear the difference.

The student of Chinese background, who is accustomed to sentences like "Boy go barn," may be completely unaware of the importance of the article and preposition:

A boy went into a barn.
The boy went into the barn.
from the barn.
by the barn.
behind the barn. etc.

The Hindi speaker will find both order and structure a problem, when in his language he would think, "I Curzon Road on live," and he reads in English, "I live on Curzon Road."

It is quite possible that the English speaker does not realize that his interpretation of the preposition is influenced by its object:

I shall come by noon (up to, not later than: time)
by bus (on a: means)
by the house (past: place)
etc.

This lack of realization is relatively unimportant until the student reads unfamiliar topics. Then he needs to be ready with all the possible meanings which a word like *by* can have in relation to the unknown word. Dictionary definitions of some of these so-called "little" words should remind the student of their varied meanings and roles in sentence structure.

Fries (26) for at least thirty-five years in this writer's memory has shown how signals to structure can be put into relief by the use of Lewis Carroll inventions in the place of nouns, verbs, adjectives, and adverbs: *The iggled oggles aggled an eggle ugglely.* Structural signals are: *The -ed -s -ed an -ly. The* predicts a noun. The verb form following *the* must be an adjective. The *-s* ending of the next word suggests the heralded noun. The *-ed* of the next suggests the past form of a verb. *An* predicts another noun, which could be *eggle*, and must be *eggle* as the next word ends like an adverb. To show their mastery of these signals, the students can insert likely meaningful substitutes for the artificial words:

> *The armed robbers raided an arsenal boldly.*

LeFevre (37) has assembled pertinent linguistic facts in his book, *Linguistics and the Teaching of Reading.* Fries (25) offers insights into reading problems with his book on a similar topic, *Linguistics: The Study of Language.*

It is too soon to say that research has shown the value of transformational grammar and generative grammar to reading comprehension. There is, however, a strong possibility that a student faced with a complicated sentence which he cannot comprehend could be benefitted by a way to break it into digestible pieces, which, understood separately, could then be seen in relationship to the other parts. Whether there is need to reconstruct these fragments into whole sentences remains a question. Perhaps there is a shorter way. And there is also the question of whether the student who cannot understand the long sentence can understand transformational grammar.

It is conceivable, too, that the generative experience would provide a creative approach which might give the student readier insight into complicated structures, and, further, might help him realize the many ways in which an author may express the same thought. Whether it can do this remains to be seen. If transformational and generative grammars do prove beneficial to reading comprehension, both will gain in motivation from being associated with the student's immediate need to comprehend what he is reading.

Buswell (16) in a study of the relationship between perceptual and intellectual processes in reading found that when training on word discrimination was followed by recognition of phrase patterns and functional reading units, the correlation of training with reading achievement increased a great deal. This finding is an encouragement to the idea that there is value in dealing with patterned language beyond isolated word drill.

O'Donnell (46) constructed a test of recognition of structural relationships of words and administered it to high school seniors along with the Cooperative Reading Comprehension Test. He concluded that there was not a strong enough relationship between scores on the two tests to warrant teaching linguistic structures as a major means of developing reading comprehension. Another reasonable interpretation might be that the points of structure emphasized in the structure test were not those required for getting the right answers in the comprehension test; or perhaps structure plays a minor role which is nonetheless important.

The two-year study by Bateman and Zidonis (7) of the effect of the study of transformational grammar on the writing of ninth and tenth graders showed that the study of transformational grammar was accompanied by improvement in sentence complexity and reduction of errors. They expressed the thought that grammar is perhaps never fully mastered—another way of saying that the possibilities in English will always race ahead of the experience of any one individual.

Darnell (20) experimenting with twenty college students, used different word-order constructions in varying degrees of disorganization, and reported, not surprisingly, that the amount of loss of clarity becomes greater as the degree of disorganization becomes greater. The reader apparently does lean on word order, on meaningful groupings of words, and upon words or word parts which signal relationship.

A further consideration is whether students find comprehension more difficult when certain signals are missing. In one sense this has already been proved by the Labov study. Beaver (8) found that students reading aloud sometimes inserted words showing relationship, when the author had omitted them:

> Author: *He was as wiry and skinny as a spider.*
> Student: *He was as wiry and as skinny as a spider.*
>
> Author: *He put down the bag he was carrying.*
> Student: *He put down the bag which he was carrying.*

Word Meaning

In a language of the versatility of English, in which the same words can play different roles (*The bare branch could bear the bear no longer*), students must know the role of the word in order to assign the proper meaning. In some cases, as Deighton (21) has shown, the student may have to read to the end of the sentence before he realizes which meaning to apply. In "The bear clung to the tree as though he were real," the last word makes a toy out of the bear. Change the last word to *afraid*, and the bear is genuine again.

Bormuth (12) in an extensive review of newer techniques of appraising the readability of material stated (p. 130), "Without question the most important advances should come through the development of better linguistic variables developed through the study of psycholinguistics, linguistics, and literary style." In earlier studies he showed the value of the cloze procedure (10) and a measure which he calls "mean word depth" (11) as ways of determining comprehension difficulty.

In discussing mean word depth (11: p. 87), a method of computing sentence difficulty introduced by Yngve, he used the illustration: "*The dark brown bear sniffed hungrily.*" Word depth is a matter of how many more elements (adjective, noun, verb) the student can anticipate in the sentence structure from the point at which a particular word is. *The* has the value of two because a subject and predicate must still come to complete the sentence. *Dark* has the value of three because it requires an adjective before the noun and predicate. *Brown* again has the value of two, *bear* of one, and *hungrily* of zero. You add all numbers total depth (9), and divide by the number of words in the sentence to find mean depth (1.5). The technique is described here not as a suggestion for classroom work but as an indication of the way the wording of the sentence holds the reader in varied degrees of suspense as he progresses and as the thought unfolds.

Thayer and Pronko (63) had 112 college students react to five fiction excerpts, and concluded that responses of students concurred to the extent that they had common backgrounds.

Russell and Saadeh (52) studied the qualitative levels of children's vocabularies in third, sixth, and ninth grades with a multiple-choice test. The concrete choices preferred by the third graders gave way to abstract and functional preferences in Grades 6 and 9.

That the general development is toward less concrete wording should not blind us to the fact that students vary in their tolerance of abstraction among themselves and among different areas. Ausubel (3) states that the culturally deprived child "suffers from the paucity of abstractions in the everyday vocabulary of his elders." Because each individual has had different degrees of exposure to the levels of thinking in different aspects of the environment, he may operate comfortably with abstract terms in one subject and cast about desperately for concreteness in another. This suggests the value of group discussions in which insights can be shared, as well as the great need for vocabulary development and concept development.

McCullough (45) has summarized data on desirable teaching practices in the development of concepts. Karlin (34), reviewing research and classroom practices, recommended direct vocabulary instruction, incidental attention in building word meanings, and wide reading, although, as he said, there is little evidence to support the conclusion that wide reading alone leads to increased vocabulary. He proposed a combination of approaches: meaningful dictionary work, word study in context rather than in isolation, uses of context clues for specific word meanings, attention to multiple meanings and figurative language, study of history and etymology relevant to current reading, and application of new words in oral and written language.

Ames (1), after a study of 334 contextual situations and readers' responses to them, offered a new extensive classification of context clues: clues derived from language experience or familiar expressions, clues using modifying phrases or clauses, clues using definition or description, clues provided through words connected or in a series, comparison or contrast clues, synonym clues, clues provided by the tone, setting, and mood of a selection, referral clues, association clues, clues derived from the main idea and supporting details pattern of paragraph organization, clues provided through the question and answer pattern of paragraph organization, preposition clues, clues using nonrestrictive clauses or appositive phrases, and clues derived from cause and effect pattern of paragraph and sentence organization (pp. 66-67).

Lieberman (38) developed concepts through direct experience with an experimental group of fifth graders, with the result that the gain in reading achievement was as great as for students whose instruction had been in diction, structural analysis, antonyms and synonyms, and context clues. The concept achievement of the former group was greater. Livingston (39), using tenth grade students, found that instruction in general semantics was accompanied by an increase in critical reading ability. Thus, it can be seen that vocabulary study does not need to be considered time taken away from comprehension, though in the extreme it could be.

New developments in theory of the structure of the intellect (28) suggest the addition of a dimension to word study (59: pp. 237-248). There is a linguistic dimension in synonyms, antonyms, homonyms, derivation, derivatives, multiple meanings including figurative meanings, uses in the structure of the sentence, and pronunciation. There is a conceptual dimension dealing with behaviors, qualities, and uses of the thing itself (such as an apple). And there is a cognitive dimension dealing with relationships within the thing itself or to other aspects of the environment (whole-part, cause-effect, sequence, comparison-contrast, coordination-subordination), and with products of intelligent consideration of it (theories, laws or principles, generalizations, summarizations, definitions, classifications, procedures). All of these, of course, are modified by an affective factor.

Comprehensive study of a word, including these linguistic, conceptual, and cognitive-affective elements, conceivably would equip the student for any aspects of meaning an author would feature in its use. Carried to the -nth degree, it would equip the student with too few words. Yet, he deals with many words in the study of one, by this pattern. Certainly the conception of this three-dimensional study of words should give us pause when we dismiss a word with a synonym, or when we find ourselves employing consistently only one or two of the aspects of word meaning.

Sentence Meaning

Weaver (68) claims that words are not self-evident or functionally valid units of meaning. Like LeFevre (37), he recognizes the influence of the environment on the word.

The meaning of a word is determined by attention to the form, the way it is used, the setting in which the use exists, and the information the reader brings to it as it is used. In the sentence, "Consumption has been one of the great problems of the modern world," the word *consumption* has to be analyzed physically to be identified as a pattern of sound. Sentence analysis shows it to be a noun equated with modern problems. Whether it is consumption of goods and services or the consumption of pathology depends upon a larger setting: the surrounding sentences, the magazine or book in which the statement appears, the heading if the book is an encyclopedia. The reader may or may not have had the varied experience with the label, *consumption*, to think that more than one meaning might be applied to it.

Multiple meanings of words dictate a process of selection as relationships are observed in written material (48). In "The bear lunged at the tourist," *The* can designate a particular bear or the classification "bear," as in, "The bear is a mammal." *Bear* as a noun can mean a person of a particular type of behavior on the stock market, a shaggy mammal, a person with a growly disposition, or a portable punch press. *Lunge* can mean to move in a leap or to move in a circle. *At* can mean *in*, *on*, *by*, *near*, *for*, or *because of*. *The* can designate a specific tourist or a classification. *Tourist* can mean a traveller, literally or figuratively.

It is in relation to each other as well as the larger environment that these words develop firm meanings, and yield the meaning of the sentence. *The* in relation to *lunged*, past tense, suggests a specific bear rather than a classification. *Lunged* implies the action of a living thing. *Bear* thus becomes alive, and, in combination with lunging and a tourist, suggests action unbecoming a dealer in stocks. Since one does not lunge something but lunges *at* something, *at* is a part of the verb expression, and carries the idea of pursuit, threat, or attack.

A particular bear, which must have been mentioned earlier (or it would be *a* bear), attacked a previously mentioned individual in the process of travelling or with the reputation of having travelled. *Tourist* could be a humorous reference to an animal which has strayed into this particular bear's territory—a poacher on the berry, honey, or fish supply.

Intonation possibilities are narrowed as the reader decides upon a particular meaning for the sentence. Edfelt (22) has reported that silent speech occurs in the reading of all persons. Far from being something to be eradicated, it is a part of the revitalization of the print. Intonation depends upon the setting of the sentence as well as upon the content. If a previous sentence had established that two animals threatened the tourist, then the intonation might be:

Bea
ear lunged at the
The tourist.

If only one animal confronted the tourist, then the stress and pitch might feature the action instead:

LUNGED
The bear
at the tourist.

While all good oral readers do not give the same rendition to the same meaning, the patterns above might be rough approximations of the range within which renditions would vary.

Lloyd (40) believes that study of intonation may ultimately prove to be more useful than the word-sound relationships now stressed. Lubershane (43) has evidence from matched groups of fifth graders that auditory exercise is associated with reading growth. Cleland and Toussaint (18) concluded in their study of interrelationships among reading, listening, arithmetic computation, and intelligence, that the relationship between listening and reading justifies more stress on listening activities in the reading program. Listening to sentences to discuss their meanings, and offering sentences of like meaning, can lift the words out of the printed page and permit concentration on meaning itself, and the intonation support for it.

Taylor (62) found the cloze procedure to be a valid measure of students' understanding of material they had not previously seen. It could well be prefaced by exercise in listening to insert the desired word. Since sentence meaning is often based upon clues beyond the sentence, exercise should not be confined to single sentences entirely.

The relation of spoken language to understanding of what is read was the concern of a British study of Baranyai (6). She reported that Hungarian children were discriminated against in 40 to 52 per cent of the questions asked on tests of verbal comprehension in English. This does not support a revision of comprehension tests to suit any one language group, but it does point to the need for sensitivity to usage which baffles the foreign language speaker.

Sentence Function

Consciously or subconsciously the good reader is aware of the kinds of ideas the author is presenting and the directions in which he is proceeding. The author does not say, "Now you should look for this," as many exercise books do, depriving the student of the natural task of identification. Nor does he say, "What question does this sentence answer?"—which is one way of arriving at the kind of idea it presents.

In "The bear lunged at the tourist," the reader has a statement of accomplished fact and a particular event. If the verb were *lunges*, it might instead express a general principle of bear behavior in relation to a general class of creatures called "tourists." Nothing specific would have occurred. *Is lunging* could express present action—a play-by-play account by a radio or television commentator.

Sentence function is influenced by setting. If the preceding sentence had been, "A tourist shot at a bear," and then, "The bear lunged at the tourist and killed him," these two sentences would have been statements of fact or event. The first sentence states a cause and the second, an effect, in a sequence of two steps. Also, the second sentence just may be a capsulated cause-and-effect relationship itself: the killing being the consequence of whatever was done in the lunging. But the killing may have required a number of steps, also.

Notice that there are no structure words, such as *because* or *first*, to suggest causality or sequence, as is handily the case in so many contrived exercises. The reader must gather these relationships from his experience with the language, with cause-and-effect and sequence, and with at least the reputation of bear-tourist encounters. Notice also that *shot at* and *lunged at* are specifics, whereas *killed him* is a generalization which leaves details to the reader's imagination.

Many students fail to realize the function of the sentence, reading as though they were stringing unrelated beads. Some of them do this because of the backgrounds from which they come. Impoverished homes are frequently language-impoverished, much being expressed in action rather than words (53). Students from such homes themselves resort to action rather than words, and may even reach the secondary school without having had sufficient speaking or listening experience with thought patterns in standard English.

Students who do not recognize the function of a sentence in a setting of other sentences or in a physical or affective situation, can benefit by listening exercises in which they identify kinds of idea, pose the question which the sentence answers, or add the possible next sentence. One thing they will surely learn is that there is almost no telling what the next sentence will be, or what its effect on the function and meaning of the preceding sentence will be. They will begin to realize that just as words may express cognitive relationships, so sentences can be statements of cognitive relationships; and only as statements are considered together can the relativity of those statements to each other be determined. Amazingly, they will find that one situation's generalization is another situation's fact: that there are hierarchies of idea. They will learn that the difference between "Once a bear tastes blood . . ." and "Once a bear tasted blood . . ." (a difference which Labov's Harlem youngsters did not notice) may well be the difference between a generalization and a particular event, with a changed meaning for "Once" and a crucial signal in the tense endings of the verbs. These discoveries can be highly interesting if the teacher will resist the temptation to tell all he knows.

Russell (51) reviewed research on the processes of thinking, with some applications to reading. Strang (59: pp. 247-257, 300-320) offered a classification of sentences and types of content in larger units of composition. Reedy (47) found high correlations between the ability to organize expository writing and critical thinking, reading, and recognition of well-organized writing. He concluded that for promoting ability to organize expository writing, direct teaching of organization is more effective than indirect teaching.

In an experiment with a prose passage from Poe and a fairy tale, MacGinities (44) used six hundred college students. His purpose was to study the effect of omitting every third, fourth, fifth, or sixth word, on the students' ability to supply the word. He found that the omission of every third word created difficulty, and that a context more than five words distant has relatively little effect upon restoration.

This study might warrant replication with different material, for in some prose passages a pronoun in the tenth line may refer to a noun in the first. Also, we need more studies which show the effect of certain types of omission on comprehension, not in terms of parts of speech or regularity of omission but in terms of strategic elements.

The deer were very ________. ________ went down to the stream to look for ________. ________ the stream bed was ________.

Finally, ________ wandered ________ somebody's garden and ________ the ________ out of the bird ________.

This passage reminds us, among other things, of the importance of associated meanings of words in the student's mastery of context. The linguist would classify this as part of the redundance of English. For simpler souls it can be referred to as the "echo effect," an assurance that the author is still on the same subject. Weaver and Kingston (69) found that redundancy in writing can improve the readability of a selection. Jenkinson (33) used the cloze procedure in a diagnostic test at the secondary level, questioning the student on the reasons for his choices to fill the blanks.

Meanings of Larger Units of Composition

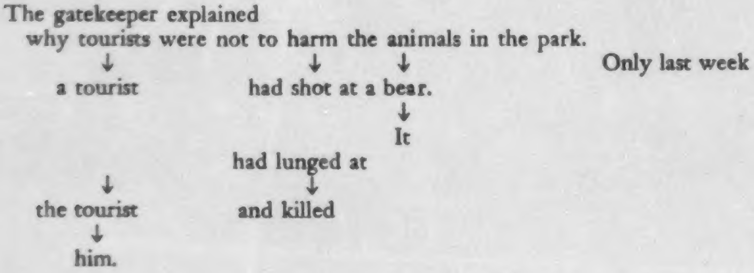
Reading instruction seems on the one hand to be influenced by a consideration of word form, word meaning, and sentence meaning, and on the other hand to be caught in a historic concern for the précis or general outline of extended prose. From the reading of a sentence to the determination of the main idea of a paragraph is quite a leap.

Only in recent years have we begun to have teaching material which makes some effort to help the student derive the main idea instead of just demanding it of him. Much of our instructional material is still on a "Did you get it? Didn't you get it?" basis—a good thing, perhaps, once the student understands the process. As it is, the student knows he was right or wrong, but not why. To support the kind of testing which much of such teaching material really is, we need to take teaching time to develop the understandings which lead to recognition of main ideas.

In a study of the effect of the presence of synonyms upon comprehension, Ruddell (49) found that the paragraph with the greater structural redundancy was the easier to comprehend. The following example illustrates some of the factors of a redundancy which help a reader determine a main idea:

> The gatekeeper explained why tourists were not to harm the animals in the park. Only last week a tourist had shot at a bear. It had lunged at the tourist and killed him.

A study of this passage for redundancy may result in this:



Such a diagram can be developed by students to clarify for themselves the relationships among ideas. *Tourists* in general are reduced to *a tourist*, *the tourist*, and *him* in subsequent sentences. *Animals in the park* dwindle to *a bear* and *It*. The general term, *harm*, is reflected in specifics: *Had shot at*, *had lunged at*, and *killed*. Notice the past of *explained*, the future of *were not to harm*, and the remote past of *had shot*, etc.

The gatekeeper explained is not repeated. *In the park* is assumed the setting of *Only last week*, which cues an example. *Only* in this context means "as recently as."

The second sentence of provocation

and the third of retribution explain *why*. The main idea is not in the first sentence but in a combination: "The gatekeeper explained that tourists were not to harm animals in the park, lest the tourists, themselves, be killed." It would take more than one example to derive a broader term than "killed," such as "harmed" or "victimized."

Function of Larger Units of Composition

In 1957 Lorge (42:18) stated that one of the most promising techniques for evaluating the structure of written material seemed to be to ask children to rearrange randomized sentences into the best order. "One of the best helps toward better thinking is to give children some kind of plan to help them organize material so that they can learn to see relationships." If the teacher suggests questions which the child's material might answer, "The very questions direct the child's attention to a thinking and reasoning process which may give the basis for an adequate mastery of supplementary reading."

The questions answered by the example in the preceding section of this article are: "What did the gatekeeper do? What did a tourist do? What did a bear do?" The following are some details of the thinking which might take place in a careful analysis of these sentence relationships:

The gatekeeper explained (not explains)=single past event

why=reason (cause for effect)

tourists . . . harm . . . animals=general terms; a law or rule

Only last week=a specific time

a tourist . . . a bear=specific characters

had shot (not simply *shot*)=reinforcement of *Only last week*.

as prior to *explained*

a tourist had shot at a bear=example of harm to animals; hence generalization or law is followed by example (specific cause and first step in a sequence of events)

It=bear; *the tourist*=a tourist; therefore, subject not changed

change of action from tourist to bear=signal of effect, second step in a sequence of events

So the gatekeeper explained the reason for a park rule by citing a cause and effect.

One might ask what kind of paragraph this is. It contains specific facts, a generalization, a law, an illustration, a sequence, and cause and effect. It does not fit nicely into our typically hopeful patterning for paragraphs which can be trusted to be one thing or another, but not a medley. The author of the paragraph above is stating a cause to support an effect (law). The cause is expressed in a cause-and-effect illustration.

The upshot is that the student must be taught to detect the kinds of thought the author is expressing, for no two authors can be depended upon to maintain the same pattern. Even the same author may be versatile in the directions he takes to make his point.

We cannot even be sure that an author will tell a sequence of events in chronological order. Did the bear attack first or did the tourist? The cue other than sentence order is experience: You don't shoot after you have been killed, and park gatekeepers do not warn against shooting if someone has been killed without provocation.

Unpredictability is the rule for units of composition beyond the paragraph, as well. However, some authors do offer assistance, such as *unpredictability* following *cannot even be sure*, and *however* in this context (but not in all contexts) suggesting a reversal or change in direction. We must guard against attributing one meaning to any one word, but rather encourage the search for different uses and meanings.

The labels students give their discoveries about cognitive relationships are not important. Nothing could be worse than to spend class time guessing the right answer and quibbling over the right label. What *is* crucial is that students should have a part in developing the concepts they label, and that they study the contribution of structure to comprehension.

Evaluation and Interpretation

Evaluation and interpretation have been treated so extensively over the years, in professional textbooks, teachers' manuals, and curriculum materials that they need not be belabored here. They call upon the students' cognitive and affective responses (57). They include the oral reading or at least subvocalization of the passage to express the reader's impression of the author's meaning. They reflect the reader's sensitivity to the author's style (54). They also have to do with the "reading between the lines" that good readers do, and the depth plunges in symbolism and universality which Russell discussed (50).

Four out of five of the questions in the STEP Reading Tests (Educational Testing Service) which were published within the past ten years significantly went beyond what the author said verbatim to what the reader could note and think about the author's inferences, presentation, motivation, and selection of facts.

Students' ability to interpret has been explored by a number of investigators. Hinze (31) observed that "conflict words" interfere, as does affective tone, with the individual's interpretation of a paragraph. Squire (55) used taped interviews with students to note changes in their interpretations of a story at different points in their reading of it. Strang and Rogers (60) found that good eleventh grade readers more often than poor readers gave symbolic interpretations of a short story. Strang (58) gave a number of techniques for diagnosing the kinds of thinking students do as they read. Of the poor readers she noted that (58:40) "Like leaves drifting down a river, they were moved by random currents of thought . . . In other words, their personal experiences tended to interfere with their comprehension of the author's thought instead of facilitating it."

One of the major contributions of recent research is the suggestion that the teacher should listen!

Russell (50) pleaded for more than surface study of meaning. (50:16-17) "The story can present these questions if you as the teacher will find a theme, look for symbols, pick out the human values involved, and encourage children to think on these things."

As interpretation is in a sense a harvest of all elements in the reading process, failure in it suggests the need for diagnosis of the entire process, including the student's attitude toward the process, to determine the deficiencies.

The speed at which the student can bring about the harvest continues to be an item of research interest. Studies by impartial investigators seem to come out with findings like those of Wilson and Leavell (73) done in 1956 in the comparison of six different kinds of speed training: no conclusive evidence in favor of any one plan. Tinker, reviewing the literature (65), deplores the spread of the erroneous idea that speed begets comprehension. Research continues to reveal (Tinker, 64:111) that "the central processes are the important determinants in reading performance" and that "oculomotor reactions are exceedingly flexible and quickly reflect any change in reading skill and any change in perception and comprehension." In essence he recommends not trying to train the cart to push the horse.

Tinker also noted (65:608-609) that experiments in pacing eye movements usually involve the use of other techniques and are never divorced from increased motivation. While speed may show improvement, there is still no firm evidence that eye-movement training or "elaborate apparatus" has achieved it. The tachistoscope is without value, according to his information, for increasing speed of reading. He rues the emphasis upon oculomotor mechanics which spirits both teacher and students away from the main tasks of reading improvement.

The voice of research in this area has been drowned by the sound of machinery and superb salesmanship.

The Use of Ideas

Ausubel and others (4) stated that "intention to remember facilitates retention by enhancing original learning." We teachers have said this in another way—that when the students were to be held responsible for their learning, they studied harder. The setting of purposes for reading, which became a slogan in the 1940s but which Gates had put into practice much earlier in his reading tests, is one way of forming [illegible] intention, whether it is an intention dictated by a situation, a teacher's suggestion, or a student's judgment after reading the first few lines of a passage.

A reader often anticipates the use of ideas as he receives them and as he reacts to them. Use is not always the last thought on something read. "What use can be made of these ideas? Does this information agree with other information I have had? What difference should this idea make to me? What problem will it help me solve? What situation meet?"

Classroom opportunities should be made for group discussion of some of the applications a student or a group of students sees in what has been read. We should be suspicious of the worth of daily reading activities which never offer such opportunity for reconciling the old ideas with the new, for resorting thoughts and seeing some of their personal meanings, for speaking and writing activities in which the student applies his own ideas to a problem, or for the wholesome experience of being challenged by different views on appropriate action.

With the encouragement of reflection and expression, the student will be more likely to invite these same ideas to new uses, and more likely to reflect on whatever he reads on his own thereafter.

* * * * *

In the opinion of this reviewer, we have seen in the past ten years an amazing affirmation of the principal fact of relativity in language. The reader must bring rounded and interrelated concepts, linguistic sophistication, and cognitive versatility to the reading act. All of the elements influence each other and benefit from one another. To insist that any one element should be our first consideration is to deny the dynamics with which we deal. To say that we shall wait for the perfect material before we act is to disavow the subtlety of the process and the importance of our teaching role to the individual student.

For some time it has seemed that the teacher might do better if he could emulate the machine. But the research of the past ten years quite clearly points to the advantages of being human when we deal with the dynamics of language.

References

1. Ames, Wilbur S. "The Development of a Classification Scheme of Contextual Aids," *Reading Research Quarterly*, 2 (Fall 1966) 57-82.
2. Arbuthnot, May Hill, and Shelton Root. *Children and Books* (Glenview, Illinois: Scott, Foresman and Company, 1968) p. 223.
3. Ausubel, David P. "How Reversible Are the Cognitive and Motivational Effects of Cultural Deprivation? Implications for Teaching the Culturally Deprived Child," *Urban Education*, 1 (Summer 1964) 24.
4. Ausubel, David P., Seymour H. Schpoont, and Lillian Cukier. "The Influence of Intention on the Retention of School Materials," *Journal of Educational Psychology*, 48 (February 1957) 87-92.

5. Bailey, Mildred Hart. "The Utility of Phonic Generalizations in Grade One Through Six," *The Reading Teacher*, 20 (February 1967) 413-18.
6. Baranyai, Elizabeth H. "Verbal Comprehension in Hungarian Children of 8-10 Years," *British Journal of Educational Psychology*, 28 (November 1958) 262-265.
7. Bateman, Donald R., and Frank J. Zidonis. *The Effect of a Study of Transformational Grammar on the Writing of Ninth and Tenth Graders*, NCTE Research Report No. 6 (Champaign, Illinois: National Council of Teachers of English, 1966).
8. Beaver, Joseph C. "Transformational Grammar and the Teaching of Reading" (Mimeographed) (Chicago: Northeastern Illinois State College, 1967).
9. Bloom, Benjamin S., ed. *Taxonomy of Educational Objectives* (New York: David McKay Company, 1956).
10. Bormuth, John R. *Cloze Tests as a Measure of Comprehension Ability and Readability* (Unpublished doctoral dissertation) (Bloomington: Indiana University, 1962).
11. Bormuth, John R. "Mean Word Depth as a Predictor of Comprehension Difficulty," *California Journal of Educational Research*, 15 (November 1964) 226-231.
12. Bormuth, John R. "Readability: A New Approach," *Reading Research Quarterly*, 1 (Spring 1966) 79-132.
13. Bruner, Jerome S. "The Act of Discovery," *Harvard Educational Review*, 31 (Winter 1961) 21-32.
14. Burmeister, Lou E. *An Evaluation of the Inductive and Deductive Group Approaches to Teaching Selected Word Analysis Generalizations to Disabled Readers in Eighth and Ninth Grades* (Madison: University of Wisconsin, November 1966).
15. Burmeister, Lou E. "Usefulness of Phonic Generalizations," *The Reading Teacher*, 21 (January 1968) 349-356, 360.
16. Buswell, Guy T. "The Relationship Between Perceptual and Intellectual Processes in Reading," *California Journal of Educational Research*, 8 (May 1957) 99-103.
17. Cassidy, Frederic G. "A Descriptive Approach to the Lexicon," *Approaches in Linguistic Methodology*, Irmengard Rauch and Charles T. Scott, eds. (Madison: University of Wisconsin Press, 1967).
18. Cleland, Donald T., and Isabella Toussaint. "The Interrelationship of Reading, Listening, Arithmetic Computation, and Intelligence," *The Reading Teacher*, 15 (January 1962) 228-231.
19. Clymer, Theodore. "The Utility of Phonic Generalizations," *The Reading Teacher*, 16 (January 1963) 252-258.
20. Darnell, Donald. "The Relation Between Sentence Order and Comprehension," *Speech Monographs*, 30 (June 1963) 97-100.
21. Deighton, Lee C. "The Flow of Thought Through an English Sentence," *Vistas in Reading*, J. Allen Figurel, ed. (Newark, Delaware: International Reading Association, 1967), pp. 322-326.
22. Edfelt, Ake W. *Silent Speech and Silent Reading* (Stockholm, Sweden: Almquist and Wiksell, 1959).
23. Elkind, David, Ronald R. Koegler, and Elsie Go. "Studies in Perceptual Development: II. Part-Whole Perception," *Child Development*, 35 (March 1964) 81-90.
24. Emans, Robert. "The Usefulness of Phonic Generalizations Above the Primary Grades," *The Reading Teacher*, 20 (February 1967) 419-425.
25. Fries, Charles C. *Linguistics: The Study of Language* (New York: Holt, Rinehart and Winston, Inc., 1962).
26. Fries, Charles C. *The Structure of English* (New York: Harcourt, Brace & World, Inc., 1952).
27. Frostig, Marianne. *Development Test of Visual Perception* (Palo Alto, California: Consulting Psychologists Press, 1961-1964).
28. Guilford, J. P. "The Structure of Intellect," *Psychological Bulletin*, 53 (1956) 267-293.
29. Hafner, Lawrence E. "Research for the Classroom: Cloze Procedure," *Journal of Reading*, 9 (May 1966) 415-421.
30. Hanna, Paul R., Jean S. Hanna, Richard E. Hodges, and E. Hugh Rudorf. "Linguistic Cues for Spelling Improve-

ment," *Elementary English*, 44 (December 1967) 862-865.

31. Hinze, Helen K. "The Individual's Word Associations and His Interpretation of Prose Passages," *Journal of General Psychology*, 64 (January 1961) 193-203.
32. Holmes, Jack A., and Harry Singer. "Theoretical Models and Trends Toward More Basic Research in Reading," *Review of Educational Research*, 34 (April 1964) 131-133.
33. Jenkinson, Marion Dixon. *Selected Processes and Difficulties of Reading Comprehension* (Unpublished doctoral dissertation) (Chicago: University of Chicago, 1957).
34. Karlin, Robert. "Research Results and Classroom Practices," *The Reading Teacher*, 21 (December 1967) 211-226.
35. Labov, William. *Some Sources of Reading Problems for Negro Speakers of Non-Standard English*, ERIC Document Reproduction Service, No. ED 010688. HC: $1.60 (Rockville, Maryland: EDRS, The National Cash Register Company, Box 2206, Zip Code 20852). Published March 5, 1966.
36. Lado, Robert. *Linguistics Across Cultures* (Ann Arbor: University of Michigan Press, 1957).
37. LeFevre, Carl. *Linguistics and the Teaching of Reading* (New York: McGraw-Hill Book Company, 1964).
38. Lieberman, Janet E. *The Effect of Direct Instruction in Vocabulary Concepts on Reading Achievement*, February 1967, ERIC Document Reproduction Service, No. ED 010985. HC: $0.56 (Rockville, Maryland: EDRS, The National Cash Register Company, Box 2206, Zip Code 20852).
39. Livingston, Howard F. *The Effect of Instruction in General Semantics on the Critical Reading Ability of Tenth-Grade Students* (Unpublished doctoral dissertation) (New York: New York University, 1964).
40. Lloyd, D. "Intonation and Reading," *Education*, 85 (1964) 538-541.
41. Loban, Walter. *The Language of Elementary School Children* (Champaign, Illinois: National Council of Teachers of English, 1963).
42. Lorge, Irving. "Reading, Thinking and Learning," *Reading in Action*, Nancy Larrick, ed. (Newark, Delaware: International Reading Association, 1957), pp. 15-18.
43. Lubershane, Melvin. "Can Training in Listening Improve Reading Ability?" *Chicago Schools Journal*, 43 (March 1962) 277-281.
44. MacGinities, Walter H. "Contextual Constraint in English Prose Passages," *Journal of Psychology*, 51 (January 1961) 121-130.
45. McCullough, Constance M. "Implications of Research on Children's Concepts," *The Reading Teacher*, 13 (December 1959) 100-107.
46. O'Donnell, Roy C. "A Study of the Correlation Between Awareness of Structural Relationships in English and Ability in Reading Comprehension," *Journal of Experimental Education*, 31 (March 1963) 313-316.
47. Reedy, John Edward. *A Comparative Study of Two Methods of Teaching the Organization of Expository Writing to Ninth-Grade Pupils* (Unpublished doctoral dissertation) (Boston: Boston University, 1964).
48. Robertson, Jean Elizabeth. *An Investigation of Pupil Understanding of Connectives in Reading* (Unpublished doctoral dissertation) (Edmonton: University of Alberta, 1966).
49. Ruddell, Robert B. "Reading Comprehension and Structural Redundancy in Written Material," *Reading and Inquiry*, J. Allen Figurel, ed. (Newark, Delaware: International Reading Association, 1965), pp. 308-311.
50. Russell, David H. "Reading for Effective Personal Living," *Reading for Effective Living*, J. Allen Figurel, ed. (Newark, Delaware: International Reading Association, 1958), pp. 12-17.
51. Russell, David H. "Research on the Processes of Thinking with Some Applications to Reading," *Elementary English*, 42 (April 1965) 370-378.
52. Russell, David H., and Ibrahim Saadeh. "Qualitative Levels in Children's Vocabularies," *Journal of Educational Psychology*, 53 (August 1962) 170-174.
53. Shuy, Roger, ed. *Social Dialects and Language Learning* (Champaign, Illi-

nois: National Council of Teachers of English, 1965).

54. Smith, Nila Banton, ed. *Development of Taste in Literature*, A Research Bulletin, National Conference on Research in English (Champaign, Illinois: National Council of Teachers of English, 1964).
55. Squire, James R. "Form Consciousness, an Important Variable in Teaching Language, Literature, and Composition," *Elementary English*, 42 (April 1965) 379-390. See also Squire, James R. *The Responses of Adolescents While Reading Four Short Stories* (Champaign, Illinois: National Council of Teachers of English, 1964).
56. Squire, James R., and Roger K. Applebee. *A Study of English Programs in Selected High Schools Which Consistently Educate Outstanding Students in English*, Cooperative Research Project Number 1994, University of Illinois (Washington, D. C.: U. S. Office of Education, 1966). *High School English Instruction Today* (New York: Appleton-Century-Crofts, 1968).
57. Stauffer, Russell G., ed. *Language and the Higher Thought Processes*, A Research Bulletin, National Conference on Research in English (Champaign, Illinois: National Council of Teachers of English, 1965).
58. Strang, Ruth. "Exploration of the Reading Process," *Reading Research Quarterly*, 2 (Spring 1967) 33-45.
59. Strang, Ruth M., C. M. McCullough, and Arthur E. Traxler. *The Improvement of Reading* (New York: McGraw-Hill Book Company, 1967).
60. Strang, Ruth M., and Charlotte Rogers. "How Do Students Read a Short Story?" *English Journal*, 54 (December 1965) 819-823, 829.
61. Strickland, Ruth. "The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children," *Bulletin of School of Education*, Indiana University, 38 (July 1962).
62. Taylor, W. L. "Cloze Readability Scores as Indices of Individual Differences in Comprehension and Aptitude," *Journal of Applied Psychology*, 41 (February 1957) 19-26.
63. Thayer, Lee O., and N. H. Pronko. "Some Psychological Factors in the Reading of Fiction," *Journal of Genetic Psychology*, 93 (September 1958) 113-117.
64. Tinker, Miles A. *Bases for Effective Reading* (Minneapolis: University of Minnesota Press, 1965).
65. Tinker, Miles A. "Devices To Improve Speed of Reading," *The Reading Teacher*, 20 (April 1967) 605-609.
66. Venezky, Richard L. "English Orthography: Its Graphical Structure and its Relation to Sound," *Reading Research Quarterly*, 2 (Spring 1967) 75-105.
67. Walker, William Ray. *Factors Influencing Retention of Read English Words* (Unpublished doctoral dissertation) (Madison: University of Wisconsin, 1964).
68. Weaver, W. W. "The Word as the Unit of Language," *Journal of Reading*, 10 (January 1967) 262-268.
69. Weaver, W. W., and Albert J. Kingston. "A Factor Analytic Study of the Cloze Procedure and Other Measures of Reading and Language Ability," *The Journal of Communication*, 13 (December 1963) 252-261.
70. Weir, Ruth H. *Formulation of Grapheme-Phoneme Correspondence Rules to Aid in the Teaching of Reading*, Final Report, Cooperative Research Project No. S-039 (Stanford, California: Stanford University, 1964).
71. Wepman, J. M. *Auditory Discrimination Test* (Chicago: University of Chicago Press, 1958).
72. Whitworth, Richard Cale. *An Appraisal of the Problems Experienced by and the Techniques Used by the English Teachers in Indianapolis, Indiana, Secondary Schools in Improving Student Reading Tastes* (Unpublished doctoral dissertation) (Bloomington: Indiana University, 1964).
73. Wilson, Grace E., and Ullin W. Leavell. "An Experiment with Accelerator Training," *Peabody Journal of Education*, 34 (July 1956) 9-18.

What Does Research in Reading Reveal—

About Reading in the Content Fields?

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The Role of Purpose and Motivation in the Improvement of Reading in the Content Fields

What do we know about high school reading and, more specifically, what do we know about reading in the content fields? Summers (20, 21) has looked at the research output at the secondary school level for the period 1900-1963 and has organized contributions into categories, some thirty-four in number. Summers observes that almost every question that could be hypothesized relating to systematic reading instruction in the secondary school has been explored. He makes the point that what is necessary now is not the identification of new categories, nor the addition of innovative new questions, but "the overriding need is for better coordination of previous effort as well as an attack in new directions on the questions consistently raised, but not satisfactorily answered." Some such questions have to do with the role of purpose in reading, and a factor closely related to purpose, motivation. It is important that teachers of reading at all levels know more about purpose and motivation, and it is apparent that one has to go to the literature in fields other than reading for what guidance can be found, for with certain conspicuous exceptions, the literature of reading offers little. What does the literature seem to say about purpose and motivation, and what have these factors to do with the teacher's role in reading instruction at the secondary school level and, more precisely, in the content fields?

The Evolution of Secondary School Reading Instruction in the United States

Lourie has recently given us an overview of the evolution of secondary reading instruction in the United States, briefly tracing developments in the first two decades of this century when

> . . . secondary school reading instruction was concerned solely with the literary and oratorical values in the study of literature. Oral reading was stressed for correctness of pronunciation and for effective expression. The student was to be challenged intellectually by questions which demanded syntactical, philological, and logical analysis of the text. (10:46)

This type of thinking gave way in the 1930s to the belief

> . . . that reading should be taught in all terms of elementary and secondary school and that all pupils of all levels of ability, from the slow to the brilliant, should have training to develop reading skills. (10:51-2)

In answer to the question "Who should be responsible?" Center and Persons report that

> . . . It is unfortunate that the educated world expects teachers of English to find the solution to the problem of retardation in reading. (3:vi)

Another view is set forth in *What the High Schools Ought To Teach*, the Report of a Special Committee on the Secondary School Curriculum, which was prepared for the American Youth Commission and other cooperating agencies including the American Council on Education which distributed the report in 1940. This statement appears:

> . . . Instruction in reading begins in the elementary school and is the most important single branch of elementary education. The mistake has long been made in secondary schools of assuming that pupils are not in need of post-elementary instruction in reading. . . . Evidence in support of the statement that secondary schools should continue to give instruction in reading is supplied by numerous studies. . . . The advantages that would come from more intelligent handling of reading in the instructional program of secondary schools are not by any means limited to mastery by individuals of the art of reading itself. At the present time an enormous amount of teaching effort is devoted to policing learners and making sure on one day that they have read and analyzed minutely the assignments that were given them the day before. *If pupils once gained the idea that they are themselves responsible for their own intellectual progress through the use of recorded experience, a great burden would be lifted off the schools* [italics supplied]. The whole structure of the program would be changed. Pupils would devour with avidity reading materials that they now never encounter because now they believe that they have done their full duty if they slavishly follow the assigned lesson requirements. (23:12-14)

Unfortunately, the whole structure of the program has not been changed with the passage of the years. Despite the fact that important studies have directed attention to the need for distributing responsibility among *all* staff members of a school for various aspects of reading instruction, it is not possible to say that these research efforts have convinced teachers that they have individual roles in providing reading guidance.

If the reading problems facing the schools today are to be resolved, it is necessary for teachers and administrators to acquaint themselves with (1) techniques for developing efficient reading and study habits, and (2) ways of developing mature, creative reading habits which will continue to serve students long after school years. *All* teachers can, to some extent, be involved in the teaching of reading; *some* must be involved to a very high degree.

How may reading skills be developed, strengthened, and refined by any teacher, regardless of content area? The research provides suggestions which are intended for the classroom teacher who is rarely a reading specialist, and who does not need to be a specialist in order to make good use of the techniques and methods recommended. Or, what are some of the factors which influence the effectiveness of reading improvement programs in high school and beyond? Obviously, says the research, the methods of instruction—the mechanical aids, the teaching procedures, the organization, do make a difference. Or, what of the matter of rate? As Moore has stated:

> Many of the reported attempts to im-

> prove rates have centered on the improvement of word perception skills and to a more limited extent, to the improvement of comprehension. Both word perception and comprehension have been more or less acceptably defined, but less attention has been directed at other and more important components of reading. These include the thoughtful reaction involving both critical evaluation and appreciative responses, and assimilation, or the integration with previous experience of the ideas acquired through reading. It is at this point that most improvement programs have been failures. They may have improved rates, that is, have improved perceptual habits which in turn have made it possible for the reader to proceed more rapidly. Or, such programs may have resulted in improved comprehension as revealed by increased skill in answering questions aimed at disclosing the reader's ability to literally recount what has been covered. (12)

Research has not delved very far into the realm of motivation, or it would be more accurate to say that researchers in the field of reading have not concerned themselves directly with motivation.

The Motivational Factor in Reading Improvement Programs in the Secondary School

A useful general description of motivation is

> . . . how behavior gets started, is energized, is sustained, is directed, is stopped, and what kind of subjective reaction is present in the organism while all this is going on. (9:vi)

Frymier states that motivation

> . . . is that which gives both direction and intensity to human behavior. In an educational context, motivation to learn is that which gives direction and intensity to students' behavior in academic situations. . . . From the operational angle, our research reveals that students whose desire to learn in school is positive in nature and optimal in level differ at least in four ways from those whose motivation is less desirable: *self-concept, values, orientation toward time, and openness to experience* [italics supplied] . . . . Drawing upon patterns which have become apparent in the course of our research, the staff at the Center for the Study of Motivation and Human Abilities has begun to reconceptualize a theory of academic motivation. Two generalizations have emerged to date. *First, whatever motivation is, it is neither intelligence or creativity. Second, any adequate concept of motivation to learn in school must encompass the fact that it involves at least three dimensions: internal-external, intake-output, and approach-avoidance* [italics supplied]. . . . Traditionally, most teachers have approached the motivational problem from two directions: quality of the stimulus (subject matter), and variations in stress (instructional techniques). (5)

Frymier observes that we need to sort out the nuances of motivation and the variations among our students and then employ differentiated teaching strategies tailored to fit each individual student's learning needs.

The first major step in getting the learning processes under way is to identify intelligently some of the learner's present and prospective problems. Simpson has observed that

> . . . the ability on the part of the learner to take this step successfully will be of paramount importance in determining whether he will be intrinsically motivated or whether he will actively help carry on the learning because he sees its probable benefit to him. If the teacher or someone else attempts to take this step for the learner the latter is not likely to accept responsibility for his learning in a wholehearted fashion. Rather he is likely to learn systematically only as long as the teacher is around and then in a rather passive manner. (16:41)

Or, as Ausubel has put it:

> Doing without being interested in what one is doing, results in relatively little permanent learning, since it is reasonable to suppose that only those materials can be meaningfully incorporated on a long-term basis into an individual's structure of knowledge that are relevant to areas of concern in his psychological field. Learners who have little need to know and understand, quite naturally expend little learning effort; manifest an insufficiently meaningful learning set; fail to develop precise meanings, to reconcile new ideas with existing concepts, and to formulate new propositions in their own words; and do not devote enough time to practice and review. Material is therefore never sufficiently consolidated to form an adequate foundation for sequential learning. (1)

Gans has observed:

> . . . that many of us can recall when some of our teachers considered that they were warming up cooling ardor about school by telling us how important school was. Others may have prescribed more homework to be sure that learning efforts came in for their proportionate share of time. Still others, and unfortunately this is still too prevalent, applied fear as the technique of recharging lagging learners. Low grades, threat of failure, notes to parents, as well as scolding and ridicule, were (and still are) the processes whereby inferior teachers attempted to stimulate increased eagerness to learn. (6:234)

The Levels of Motivation

Levels of motivation and their uses have been studied by Simpson (16:43), who envisions a learning-motivation ladder as consisting of six levels:

(1) the lowest level, where learning is based on fear;
(2) the next to lowest level finds people working for extrinsic rewards (credits, marks, etc.) without understanding the purposes of the instructor;
(3) the third level from the bottom wherein the individual understands the purposes of the instructor directing the work, largely rejects these, but works for extrinsic rewards;
(4) the fourth level—here the individual sees the purposes of the instructor, accepts them as important, and works to carry them out without having any share in forming them;
(5) at the fifth level, near the top of the ladder, is the individual who with proper guidance, has set up well-thought-out goals and problems and has started to meet them, and,
(6) the sixth or highest level finds the individual independently setting up his own goals and problems and facing them wisely with a minimum of help from others.

It goes without saying that no competent instructor of a reading improvement program would be satisfied with the so-called lower motivational levels, but it is not always possible to begin operations at the higher levels—or put another way, operations do not usually begin at an appropriate level.

The Role of Motivation and Purpose in Reading Improvement Programs

When a beginning reader is delayed in learning that we *read for meaning*, or some equally clear purpose, the result can be ineffective reading habits. It can also produce slight to severe retardation in reading achievement. Teacher explanations and children's discussions of why various "reading for meaning" teaching activities are used are important when teaching beginners to read. Young children have limited ability to understand the reason for using these activities. Therefore, the inadequately trained beginning reader may see the reading activities as nothing more than interesting or uninteresting pastimes. This attitude toward reading may *never* change!

What is meant by the term *purpose* as it pertains to reading? There would appear to be two major kinds of purposes for reading: first, the broad, general purposes which are sometimes called the life purposes for which a reader selects and reads particular books or articles. These are called *primary purposes*. Second, the different kinds of comprehension skills have been referred to as making up the *secondary purposes* category.

Examples of primary purposes according to Smith (17) are to extend one's range of information; to evaluate possible solutions to social or economic problems; to understand one's self; to achieve aesthetic appreciation, and the like. Examples of the secondary purposes include understanding the main idea; noting sequential order; making generalizations; and anticipation of outcomes.

Smith makes the point that reading to understand details and the main idea is considered basic to all other secondary purposes. Reading to understand ideas in sequential order, to follow directions, to make comparisons, to relate cause and effects of ideas and/or phenomena, and to understand or to reach generalizations and conclusions seems to be dependent upon the reader's skill in reading for details and for main ideas. Interrelated with any or all of the foregoing are reading to anticipate ideas or to predict outcomes, to understand characterization and descriptions, to determine the mood or tone of a selection, to distinguish between fact and opinion and fiction, and to understand sensory imagery. It appears that the reader may be called upon to achieve the foregoing purposes by understanding the *literal* meanings, the *implied* meanings, or *both* the literal and implied meanings.

This same writer points out further that both the primary and secondary purposes appear to be interrelated and dependent upon each other. Smith observes that there is no published research which shows the interdependency among the purposes, but she believes that subjective opinion points to this assumption. Smith feels that many extraneous factors which may be important in reading but are not readers' purposes *per se* are to be noted in the literature. These include writers' purposes, style, content of the selections, writers' points of view, the literary type, and techniques used in reading for different purposes, such as the selection, analysis, organization, and evaluation of the content and relating the content to one's own personal experiences.

Dealing with Motivation and Purpose in Reading Improvement Programs

It may well be that instructors in reading improvement programs will have to learn how to deal with motivational problems by departing from the educational literature, particularly that of reading. Marx (11), in his treatment of motivation in the *Encylopedia of Educational Research* (3rd edition, 1960), reports the paucity of research contained in the *Journal of Educational Research* in the years from 1925 to 1957. During that same period he states that texts on educational psychology commonly devoted considerable space to a discussion of motivation, yet only a tiny proportion of journal space was devoted to experimentation in motivation.

The fields of human relations and management have something to contribute to the worker in education. Writers like Giles (8) and Gellerman (7:175-6) who have been working in these respective fields have advanced theories and practical suggestions which may well prove to be quite effective in reading improvement situations. In discussing the dynamics of motives, Gellerman observes that

> . . . much of the difficulty we have in understanding motives stems from the way they arrange themselves in any given individual. They seem to acquire a structure and to follow a dynamic all their own. The structure has sometimes been called a hierarchy; that is, one motive will usually be more powerful,

> and therefore more prominent in influencing the individual's behavior, than the others. Another will be the second most powerful, another the third, and so on. However, this structure is not fixed: A primary motive today may not be primary tomorrow. A reshuffling occurs whenever a motive has been so well satisfied that it sinks into the background and all others move up a notch to replace it. As long as the "old" motive gets plenty of gratification it will remain fairly quiescent and much less likely to rouse the individual to action than one of the "newer" still unsatisfied ones.

Gellerman sees the kinds of motives which can be diminished when enough rewards are given as *satisfiers*—that is, they press themselves insistently upon the individual when they do not receive enough gratification but lapse into insignificance when they do. Likewise he sees those motives which are not susceptible to being "appeased" as *motivators.* He believes that they can continue to play commanding roles in an individual despite the fact that he enjoys repeated success. *Motivators* are likely to be highly subjective, personalized experiences like feelings of growth, achievement, and significance.

Gellerman states that

> . . . a person learns how to satisfy the needs that one phase of his life thrusts upon him, and having satisfied them, he is no longer very strongly motivated by them. Instead he anticipates newer needs. This is why it is a mistake to continue appealing to individuals by satisfying needs that are already satisfied. Thus a person's motives may not always be the same; at any given time he is likely to have a *motivationalpotential*—that is, a capacity for responding to new incentives and rewards—which he has not yet given any hint of possessing. This potential is likely to remain masked until his more basic needs are attended to and will not ordinarily spring forth merely because an incentive has been flourished before him. As a matter of fact, his overt pursuit of a particular goal may give a completely misleading impression of what his true motivation is like. Lastly, time itself will gradually realign the importance of his motives. Motivation is not, therefore, a particularly straightforward process, which is precisely why so many straightforward schemes for motivating individuals achieve such unspectacular results. (7:182)

Certain factors profoundly influence the effectiveness of reading improvement programs and one of the most important but difficult of these factors to deal with is that of motivation. The levels of motivation are inextricably interwoven with the purposes for which individuals read. Not all instructors in reading improvement programs recognize the importance of and interrelations of motivation and purpose, nor, it seems safe to say, do their students.

Reading and Cognitive Abilities

What are some of the general considerations which must be borne in mind as the content teacher strives to develop reading abilities in the content fields?

Investigators in the field of reading have repeatedly drawn attention to the ranges in reading ability found in elementary school classrooms. J. Wayne Wrightstone (25: 13) maintains that this range of ability and achievement increases from grade level to grade level. His studies show that at fourth grade level, the range of achievement is between five and six years; while at the sixth grade level, the range of achievement is between seven and eight years.

Strang and Bracken (19: 60-61) point out that individual teachers have discovered wide ranges in the reading levels of their students. A few of these are illuminating: one high school teacher who became interested in this problem surveyed her tenth grade class with results which were amazing to her. According to standardized tests, she had three students reading at tenth grade level, seven below, and sixteen above. In this particular class, *seven* levels of reading ability were represented.

Another teacher surveyed her eleventh grade class using standardized reading tests also. She discovered a range of *fourteen* grade levels. In IQ, as measured by group intelligence tests, the range was thirty-six points. As judged by test results, some were retarded while others were reading better than their intelligence test scores would indicate. In a college reading class made up of freshmen from liberal arts and sciences and graduate students, standardized reading test scores ranged over *twenty* reading grade levels.

As one examines such situations, these ranges of differences appear not only in general reading level but also in proficiency in different reading skills. Some students are low in speed, high in comprehension, and average in vocabulary. Others are high in speed, low in comprehension, and low in vocabulary. Still others are average in speed, high in comprehension, and high in vocabulary. In the more advanced skills of drawing conclusions, making inferences, applying reading, interpreting what is read, reading creatively, reading critically, and reacting to reading, the range of individuals within groups, and from group to group, is tremendous.

The teacher's task is extremely complex when it is realized that in the area of comprehension alone, many different elements are involved. It is not sufficient to recognize that the student is low in comprehension, for Davis (4) has identified no less than *nine* important elements of comprehension. Davis makes no claim that he has identified *all* elements, but the nine he has described are: (1) knowledge of word meanings; (2) ability to select the appropriate meaning for a word or phrase in light of its particular contextual setting; (3) to follow the organization of a passage and to identify antecedents and references to them; (4) to select the main thought of a passage; (5) to answer questions that are answered directly in a passage; (6) to answer questions that are answered in a passage but not in the words in which the question is asked; (7) to draw inferences from a passage about its contents; (8) to recognize the literary devices used in a passage and get its tone and mood; (9) to determine a writer's purpose, intent, and point of view, i.e., to draw inferences about a writer.

Against this background, teachers typically find students in a given class who do not read anywhere near grade level; in the same class the possibilities are good that several students will be reading two or three levels above what might be expected. In the elementary grades it is still not uncommon to find that the tendency is to test children on an achievement test and then to group them on the basis of the results, assuming that the needs of all students who score 5.0 are alike and those who score 2.0 have similar needs. It is obvious that this practice merely reduces the range of achievement, whatever that may mean, within a group. It says nothing about what the actual reading needs of the children might be.

Teachers may have access to the results of standardized tests, but at best standardized tests show students' present status in the kinds of reading that are measured by these tests. They are limited in their application because they represent somewhat artificial, rather than natural, reading situations. They measure a specialized ability to match words with suggested meanings, or phrases with proposed statements. None of the standardized tests now available measure adequately the so-called higher levels of reading ability—the abilities to comprehend relationships in a long passage calling for sustained attention, to organize content, to draw inferences, to grasp metaphors and shifts of meaning, and to apply what is read. In short, they do not measure many aspects of growth that may be expected to take place during the elementary and secondary school years.

It should be clear that while reading is a very difficult process for the student to come to grips with and to really "master," the teacher's task in teaching reading is a formidable one also. Stahl observes that

> . . . not only must the teacher have thoroughly mastered and understood the teaching process, but he must be prepared to interpret this process to each and every pupil, attempting to adapt the process to each individual's own capabilities and achievements (18).

Usually the teacher's program in the area of reading skills tries to aid the student in developing a good vocabulary, in developing techniques for word recognition, understanding what is read, reading with a reasonable degree of speed, and developing reading interests. If she finds it necessary to concentrate on a basic reading program, regardless of the chronological ages of her students, her goal of instruction is to equip the student with those reading skills that are common to *all* situations and purposes peculiar to reading at the levels involved. Research shows that the most successful programs in the elementary schools are usually based on the use of good books and materials. But many of the problems seem to stem from the nonuse as well as the misuse of materials.

Take the much discussed basal reader set found in elementary classrooms. The nonuse of the manual accompanying the series has frequently resulted in an overemphasis upon literal comprehension as a technique for developing interpretation. In such situations there is little or no provision for developng skills beyond simple recall. To follow the basic reader a bit further—Williams (24:34) maintains that the misuse of basic readers may also limit reading development, for when students are required to try to read at their frustration levels, they are not usually equipped to handle the meaning skills at these forced levels.

Triggs, in her book, *We All Teach Reading* (22) has developed the point that those who have worked to define the reading skills have partially isolated, with some degree of success, four types of skills which may be taught: (1) word perception or recognition, (2) vocabulary, (3) comprehension, and (4) flexibility in reading rates. It is obvious that these skills are not independent of each other.

Many people like to believe that as students move from the middle and upper grades and junior high school those four tools are more or less established, but they do not expect that students will be skilled in applying these to reading *all* subject matter material. More perceptive teachers know that many students will enter high school without these tools well in hand. Thus, it becomes necessary for the teacher concerned, whether she be in a self-contained classroom or a content specialist, to identify which students lack the basic tools and to see that students develop these tools as they *can*, if proper instruction is provided. It is therefore necessary for the junior high teacher and the senior high school teacher to know what these tools of reading are, and how to determine whether a student has developed them. Then, the teacher must teach the application of established skills, and secondly, she must help or advise the student whose skills are weak, where he can find help.

Up to this point reading skills in a broader sense have been considered. This must be the approach for usually it is only after the student, whatever his grade level in school may be, has learned to read effectively and efficiently that study skills emphases are effectively learned, although concomitant developments are not unheard of. The efficient reader therefore is enabled to combine his reading skills with study skills, and learning is thereby enhanced. What are the so-called study skills? Almost every writer, depending on his area of interest and his level of concentration, has his own classification system. Thus we are able to delineate treatments at successive levels of advancement. For instance, Sheldon (15:66) feels that they include: skimming; outlining; summarizing; organizing ideas; taking notes; using the parts of a book; using reference materials; and reading and interpreting maps and charts.

Robinson (14), concerned at another level, the junior high school, identifies six major study skills fields: following directions; interpretation; evaluation; organization; retention; and locating information. Robinson believes that study skills are best taught by using content-area materials for only in this manner is their use meaningful and functional. He employs the term "clusters of study skills" to emphasize the fact that in planning a content unit of study, attention must be given to those groups of sub-skills which will be needed for the successful completion of the unit. In Robinson's system, the student is led through *Step One: Key Words in a Sentence* to *Step Two: Key Sentence in a Paragraph* to *Step Three: The Main Thought in a Paragraph* and thus onward to the point where he will seek organizational patterns in the reading matter as presented by the writer. In this way the reader gains in the ability to comprehend and to retain. Where the teacher enters the picture is in her deliberate "clustering" closely related skills together and in organizing the sequential steps so effectively and so strategically within the cluster that the student encounters a series of successful experiences. But, as Robinson has pointed out:

> . . . *Challenge* is of tremendous importance *after* students feel that they have mastered the skill or skills to some degree. For even with the teacher's help in dealing with "clusters of skills," junior high school textbooks will present many challenges. (14)

Francis P. Robinson (13), not to be confused with the Robinson previously cited, is generally credited with having developed the so-called SQ3R method. This is usually found quite effective for improving the study skills of older and more mature students, but imaginative teachers do not find it difficult to adapt the system to fit the needs of individuals found in any of the content fields.

There are other approaches that might be used but the foregoing examples should suffice—*the point is that extensive reading and rereading will not develop study skills*—experts are united in the belief that improvement comes only by changing the quality of the study method employed.

Any skills development program is for *all* students regardless of grade level or place in high school. Experts agree and emphasize that such a program should *not* be viewed as a remedial program for poor readers alone. The program must be teacher-guided and must make provision for a systematic, coordinated, step-by-step kind of development. It is not suggested that any one teacher attempt to do everything for everybody within the short span of a year. But the individual teacher must be acutely aware of what reading is. She must know that it is most certainly more than perceiving or recognizing words, and comprehending their literal meanings. She must see it as a composite of recognizing and comprehending and evaluating and appreciating factors. These may not all be developed until late in the students' careers unless a studied effort is exerted at successive levels as students move through school. This *can* be done, and until it is, schools will continue to fall short of goals tha might be attained.

Just as teachers at the more advanced levels have tended to fix responsibilities for and to expect rather high levels of competence in basic reading skills in students coming to them from the elementary schools, so elementary teachers have left to the junior high and senior high schools the tasks involved in developing individuals capable of more mature performance. Here apparently the thinking has been that only the "mature" individual can come by mature reading habits.

Many factors determine when or whether a given reader reaches maturity. Two of the most important are the potential which the individual brings to the reading situation and the way in which the home, the school, and other agencies structure the reading situation for him. Much can be done in the elementary school to stimulate and direct reading activities so as to insure maximum progress toward maturity within the limits of the individual's capacity. Much may have to be done in the high school.

There ought not to be much disagreement with the statement that the individual teacher, whatever her level, is the key person in any program designed to develop readers who perform well at the more mature levels. There is abundant research evidence which shows that students do not come by higher reading abilities accidentally, nor do they come by them easily unless they are influenced by a home and a school which recognize and promote a realization of the significance of learning through reading.

Summary

What is required and what many content area teachers are now striving for in their programs are strategies designed to provide for many needs. Although it may be far off for some students, growth is needed in the capacity to read between the lines, to infer what is implied but not stated, and to grasp accurately the meanings conveyed by new language forms and figures of speech. Programs in some schools demonstrate that teachers recognize that growth is needed in the ability to discern parallels in one's own experience and to interpret the ideas acquired in light of what he knows or can read and learn about. Equally important is the ability to think clearly about the accuracy, value, and significance of what is read, and to evaluate critically that which is comprehended.

Many researchers believe that what is required is a "total approach to reading." By that is meant a plan to integrate the best materials, methods, organizational plans, and inservice education into a unified package. Botel, for example, maintains that to initiate a total approach to reading, the total staff of a school system, including administrators, supervisors, librarians, teachers, and guidance personnel, need to think creatively about certain big questions such as the following: "How can we help teachers assist children in acquiring lifelong habits of reading?" (2). In such an approach the school subscribes to the belief that excellence in reading is not the result of installing a program, but rather that it is the product of a coordinated, thoughtful, continued total staff activity.

References

1. Ausubel, David P. "A Teaching Strategy for Culturally Deprived Pupils: Cognitive and Motivational Considerations," *The School Review*, 71 (Winter 1963) 458-459.
2. Botel, Morton. "We Need a Total Approach to Reading," *The Reading Teacher*, 13 (April 1960) 255.
3. Center, Stella S., and Gladys Persons. *Teaching High School Students To Read*, English Monograph No. 6, National Council of Teachers of English (New York: Appleton-Century-Crofts, 1937).
4. Davis, Frederick B. "Comprehension in Reading," *Baltimore Bulletin of Education*, 27 (January-February 1951) 20.
5. Frymier, Jack R. "Motivating Students To Learn," *NEA Journal*, 57 (February 1968) 37-39.
6. Gans, Roma. *Common Sense in Teaching Reading* (Indianapolis: The Bobbs-Merrill Co., Inc., 1963), p. 234.
7. Gellerman, Saul W. *Motivation and Productivity* (New York: American Management Association, 1963).

8. Giles, Harry. *Education and Human Motivation* (New York: Philosophical Library, 1957).
9. Jones, M. R. *Nebraska Symposium on Motivation* (Lincoln: University of Nebraska, 1955).
10. Lourie, Samuel. "An Overview of the Evolution of Secondary Reading Instruction in the United States," *Socio-Economic and Historical Factors in Secondary Reading* (Unpublished doctoral dissertation) (New York: New York University, 1967).
11. Marx, Melvin H. "Motivation," *Encyclopedia of Educational Research* (New York: Macmillan, 1960), p. 895.
12. Moore, Walter J. "Improving Reading Rates," *Improvement of Reading Through Classroom Practice* (Newark, Delaware: International Reading Association, 1964).
13. Robinson, Francis P. *Effective Study*, Revised edition (New York: Harper & Row, Publishers, 1961).
14. Robinson, H. Alan. "A Cluster of Skills: Especially for Junior High Schools," *The Reading Teacher*, 15 (September 1961) 25-28.
15. Sheldon, William D. *The Sheldon Basic Reading Series, A Complete Survey* (Boston: Allyn & Bacon, 1961), p. 66.
16. Simpson, Ray H. *Improving Teaching-Learning Processes* (New York: David McKay, Inc., 1953), p. 41.
17. Smith, Helen K. "The Responses of Good and Poor Readers When Asked To Read for Different Purposes," *Reading Research Quarterly*, 3 (Fall 1967).
18. Stahl, Stanley. "An In-Service Approach to the Improvement of Developmental Reading Instruction," *Elementary English*, 34 (May 1957) 312-313.
19. Strang, Ruth, and Dorothy K. Bracken. *Making Better Readers* (Boston: D. C. Heath & Company, 1957), pp. 60-61.
20. Summers, Edward G. *An Annotated Bibliography of Selected Research Related to Teaching Reading in the Secondary School: 1900-1960* (Pittsburgh, Pennsylvania: University of Pittsburgh, 1963), 183 pp.
21. Summers, Edward G. *An Annotated Bibliography of Selected Research Related to Teaching Reading in the Secondary School, Supplement: 1961-1963* (Pittsburgh, Pennsylvania: University of Pittsburgh, 1964), 30 pp.
22. Triggs, Frances O. *We All Teach Reading* (Mountain Home, North Carolina: Committee on Diagnostic Reading, 1955).
23. *What the High Schools Ought To Teach* (Washington: American Council on Education, 1940), pp. 12-14.
24. Williams, Gertrude. "Provisions for Critical Reading in Basic Readers," *Critical Reading*, E. Elona Sochor, ed. (Champaign, Illinois: National Council of Teachers of English, 1959), p. 34.
25. Wrightstone, J. Wayne. *Class Organization for Instruction*, What Research Says to the Teacher Series, No. 13 (Washington, D. C.: Department of Classroom Teachers and American Educational Research Association, 1957), p. 13.

Selected Readings for the Content Area Teacher

1. Braam, Leonard S., and Marilyn A. Roehm. "Subject-Area Teacher's Familiarity with Reading Skills," *Journal of Developmental Reading*, 7 (Spring 1964) 188-196.
2. Burnett, Richard W. "Reading in the Secondary School: Issues and Innovations," *Journal of Reading*, 9 (April 1966) 322-328.
3. Call, Russell J., and Neal A. Wiggin. "Reading and Mathematics," *Mathematics Teacher*, 59 (February 1966) 149-157.
4. Glock, Marvin, and Jason Millman. "Evaluation of a Study Skills Program for Above-Average High School Pupils," *Journal of Developmental Reading*, 7 (Summer 1964) 283-289.
5. Haugh, Oscar M., and Cloy D. Hobson, eds. "Teaching Reading in the High School in Language Arts, Social Studies, Science, Mathematics, Industrial Arts," *Kansas Studies in Education*, 10 (February 1960) 1-32.
6. Herber, Harold L. "Teaching Reading and Physics Simultaneously," *Improvement of Reading Through Classroom Practice*, International Reading Association Conference Proceedings, 9, J. Allen Figurel, ed. (Newark, Delaware: The Association, 1964), pp. 84-85.
7. Jackson, Jeanne R., and Henry Dizney.

"Intensive Vocabulary Training," *Journal of Developmental Reading,* 6 (Summer 1963) 221-229.

8. Jacobson, Milton D. "Reading Difficulty of Physics and Chemistry Textbooks," *Educational and Psychological Measurement,* 25 (Summer 1965) 449-457.
9. Karlin, Robert. "Teaching Reading in High School," *Education,* 84 (February 1964) 334-338.
10. Kingston, Albert J. "What Do We Mean by Reading in the Content Areas?" *Journal of Developmental Reading,* 7 (Spring 1964) 146-158.
11. McDonald, Arthur S. "Intellectual Characteristics of Disabled Readers at the High School and College Levels," *Journal of Developmental Reading,* 7 (Winter 1964) 97-101.
12. Mallinson, George G. "Reading and the Teaching of Science," *School Science and Mathematics,* 64 (February 1964) 148-153.
13. Michaels, Melvin L. "Subject Reading Improvement: A Neglected Teaching Responsibility," *Journal of Reading,* 9 (October 1965) 16-20.
14. Parker, Don H. "Reading in Science: Training or Education?" *Science Teacher,* 30 (February 1963) 43, 45-46.
15. Raygor, Alton L., and Edward G. Summers. "A Comparison of Two Methods of Teaching Reading Comprehension to High School and College Students," *New Developments in Programs and Procedures for College-Adult Reading,* Twelfth Yearbook of the National Reading Conference, Ralph C. Staiger and Culbreth Y. Melton, eds. (Milwaukee, Wisconsin: The Conference, 1963), pp. 118-123.
16. Schneyer, J. Wesley. "Significant Reading Research at the Secondary School Level," *Reading Instruction in Secondary Schools,* Perspectives in Reading, No. 2 (Newark, Delaware: International Reading Association, 1964), pp. 131-149.
17. Schrock, R. E., and Milton Grossman. "Pilot Study: Motivation in Reading," *The Reading Teacher,* 15 (November 1961) 119-121.
18. Shafer, Robert E. "The Reading of Literature," *Journal of Reading,* 8 (April 1965) 345-349.
19. Shores, J. Harlan. "Reading Interests and Informational Needs of High School Students," *The Reading Teacher,* 17 (April 1964) 536-544.
20. Smith, Nila Banton. "Reading in the Subject Matter Fields," *Educational Leadership,* 22 (March 1965) 382-385.
21. Strang, Ruth. "Developing Reading Skills in the Content Areas," *The High School Journal,* 49 (April 1966) 301-306.
22. Strang, Ruth. "Diagnostic Teaching of Reading in High School," *Journal of Reading,* 8 (January 1965) 147-154.
23. Strang, Ruth. "Progress in the Teaching of Reading in High School and College," *The Reading Teacher,* 16 (December 1962) 170-177.
24. Summers, Edward G. "Reading in the Secondary School," *Review of Educational Research,* 37 (April 1967) 134-151.
25. Tremonti, Joseph B. "Responsibilities of the Secondary School Teacher in the Reading Program," *Journal of Developmental Reading,* 7 (Summer 1964) 290-306.
26. Whitman, Robert S. "Significant Reading Experiences of Superior English Students," *Illinois English Bulletin,* 51 (February 1964) 1-24.

Selected Books for the Content Area Teacher

1. Bamman, Henry A., Ursula Hogan, and Charles B. Green. *Reading Instruction in the Secondary Schools* (New York: David McKay, Inc., 1961), 266 pp.
2. Dawson, Mildred A., compiler. *Developing High School Reading Programs* (Newark, Delaware: International Reading Association, 1967), 180 pp.
3. "The English Curriculum in the Secondary School," *Bulletin of the National Association of Secondary School Principals,* 51 (April 1967) entire issue.
4. Hafner, Lawrence E. *Improving Reading in Secondary Schools* (New York: The Macmillan Company, 1967).
5. Karlin, Robert. *Teaching Reading in the High School* (Indianapolis: The Bobbs-Merrill Co., Inc., 1964).

What Does Research in Reading Reveal—

About Materials for Teaching Reading?

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Teachers planning developmental programs in reading need to be aware of (1) the wide range of teaching materials available to them, (2) research findings in the area of materials, and (3) ways in which to make better use of materials.

Teaching materials are not simply another component of the developmental reading program; they are, in many respects, a key component of the program. As Whipple (28) has noted,

> One of the first steps in improving reading instruction in many schools consists in increasing the amount, quality, and variety of the supply of reading material and other aids to learning. The resources at the teacher's disposal determine to a great extent whether he can provide a systematic and enriched program, meet the individual differences of children, and furnish enough books and selections on a given theme to relate the reading and studies underway to centers of interest for the group and the individual child. Without enough appropriate materials and equipment, adequate instruction cannot be given, either in reading as such or in the entire school program.

It is the purpose of the following pages to survey the range of materials currently available to junior and senior high school teachers, examine examples of different types of materials, comment upon research findings, and suggest ways of best using existing materials. No attempt is made to present a comprehensive inventory of all available textbooks, workbooks, kits, magazines, or audiovisual devices. Annotated lists of printed instructional materials are available (23), as are lists of audiovisual devices (4). Specific examples cited here are those with which the writer is most familiar, and limitations are hereby acknowledged.

The Range of Materials

Many secondary teachers seeking a basic structure upon which to build developmental reading programs have used basal-type readers similiar to those used in the elementary school. Such books, generally, are part of a series, extending from Grades 1 through 9, from 7 through 9, from 7 through 10, or from 7 through 12, and developed according to some overall plan which presents skills-building material sequentially. They are usually accompanied by workbooks, teacher's manuals, study helps, and phonograph recordings or other audiovisual materials. At their best basal-type readers are based upon research in student reading interests at various grade levels and attentive to reading grade levels as defined in terms of vocabulary and complexity of sentence and paragraph structure. Teachers who favor basal reading series in secondary schools are attracted by (1) the research and planning that led to their development, (2) the sequential skills instruction, (3) the wealth of supplementary materials included with the series, (4) the general attractiveness of the materials, and (5) the attention their authors and editors have paid to student interests and needs. An example of a basal-type series for secondary schools is the Ginn Junior High School Series (21).

Other secondary school teachers have organized effective developmental reading programs around various series of literature anthologies. Recognizing the high quality of scholarship and editorial work which characterizes most junior-senior high school literature series, teachers of English in particular have used them as the core of their reading programs. Recognizing, too, that such series are not designed primarily to develop reading skills, many teachers have supplemented them with teacher-made materials; they have duplicated for their classes exercises in noting main and supporting ideas, following sequence of events, using structure and context clues to discover the meanings of unfamiliar words, and other basic skills. An example of a literature series often used in secondary reading programs is *Adventures in Literature,* (2) a series extending from Grades seven through twelve and supplemented by teaching guides, study aids, test booklets, and an entire second-track series, *The New Companion Series* (15).

Some teachers have organized developmental programs around skills-building materials provided by publishers. They have used, instead of story-centered anthologies, such as a basal or literature series, textbooks which focus directly upon the sequential development of skills. The Macmillan Reading Program, *Advanced Skills in Reading, Books 1-3* (11), for example, provides abundant exercise material for developing such skills as reading for details, getting main ideas, and skimming. Teachers favoring a skills-centered approach often supplement their programs by using short stories, dramas, novels, magazines, basal readers, and literature anthologies.

Throughout the years many secondary teachers have used workbooks as the basis for their programs, and have found that these materials work successfully with entire classes, with groups within the class, and with individual students. Examples of workbooks are: *Reading for Meaning* (9), by Guiler and Coleman, which provides reading units of approximately three hundred words followed by exercises in word meaning, getting central ideas, recalling details, understanding paragraph organization, and drawing conclusions; *SRA Better Reading, Books 1-3* (24), by Simpson, which contains short articles and stories followed by detailed comprehension questions; and *Be a Better Reader, Books 1-6* (25), by Smith, which provide basic skills practice in the content fields of science, mathematics, social sciences, and literature. Teachers organizing their developmental programs around workbooks and series of workbooks also supplement their programs by encouraging wide reading in newspapers, magazines, library books, basal readers, and anthologies.

Increasingly, teachers are adding to reading programs by using magazines, kits, book clubs, and audiovisual devices. *Junior Scholastic* for upper-elementary and junior high school, *Senior Scholastic* and *Calvalcade* for high school, *Scope* for urban students (13), *Read* for junior high school students (18), and special editions of *The Reader's Digest* (19), all provide a valuable bridge between secondary programs and adult magazine reading. In addition, some magazines, such as *The Reader's Digest* (20), publish specific skills-building materials in magazine format. Many teachers are also using portable kits with individual lessons on cards, practice drills, comprehension checks, and other aids. The *SRA Reading Laboratory* (22) and Scott, Foresman and Company's *Tactics* (16) are examples of kits being used successfully by teachers to individualize instruction in reading. Packaged collections of paperbound books organized around unit themes and student book clubs are proving helpful to teachers who want students to read widely to practice skills being developed in the reading program. Audiovisual devices, long used in remedial reading classes and reading clinics, are being used more and more in developmental classes for basic and supplemental instruction as well as for motivation. Tachistoscopes, such as the *EDL Flash-X* and *Tach-X* (7), and pacers, such as the *Craig Reader* (6), encourage students to increase eye span and speed of perception.

Developmental reading teachers frequently make use of books designed specifically for students needing high-interest, low-vocabulary materials. The *Teen-Age Tales* series (26) and the *Let's Read* books (14) present short selections chosen because they interest more mature students but are written at elementary grade level. *Learning Your Language* (12) by Herber and Nolte includes readings and exercises, organized by themes and aimed at below-norm readers and slower learners. The *Galaxy Program* (17) includes three books, *Vanguard*, *Perspectives*, and *Accent: U. S. A.*, and supplementary materials, for students in Grades 9, 10, and 11.

Teachers of urban, disadvantaged students—long deprived of adequate teaching materials—are currently enjoying almost an embarrassment of riches. Among these are:

- *The Turner-Livingston Reading Series* (27): daily lessons in six workbooks which deal with basic social behavior, self-concepts, and the development of personal goals;
- *The Macmillan Gateway English Program* (8): a series of paperbound anthologies, developed by the staff of the Gateway English Project at Hunter College, aimed at disadvantaged urban students;
- *Project ACE* (1): an Activity-Concept English Program which includes paperbound anthologies, diecut cardboards, pads, and other materials planned to interest so-called "unteachable" ninth grade students;
- *Holt's Impact* (5): a series of four paperbound anthologies, recordings, a classroom library of fifty paperbound books, and a teacher's guide, aimed also at urban students;
- *The Way It Is* (3): ten books designed for eighth to tenth grade students reading at fourth to seventh grade level, and accompanied by recordings, Learning Logs, and other materials.

Teachers seeking reading materials for developmental classes are confronted by a wide range of materials. The problem today—so unlike that of a decade ago—is to choose the most appropriate materials from the wealth of possible choices.

Research Findings

As Hanlon (10) noted more than ten years ago, ". . . research says that we must provide a wide variety of interesting materials, at all grade levels, and with purposeful activities—in order to give pupils the satisfactory experiences in which skills in reading are developed, maintained, and improved." Unfortunately, recent research has had little to say about the relative effectiveness of various kinds of materials and almost nothing to say about specific materials. This writer finds few well-designed, controlled studies in the area. The few that have been completed in recent years present findings that are equivocal or unsatisfactory for teachers seeking information to make evaluations of specific materials and consequently are not included here.

Teachers will not find, for example, solidly researched answers to such questions as:

- Are basal reading programs more effective for teaching reading in secondary schools than literature anthologies?
- Are workbooks as effective as many teachers assert?
- Should programs be skills-based rather than story-centered?
- Does wide reading, through book clubs and regular use of the libraries, improve reading achievement more than intensive skills work in the classroom?
- Are certain materials aimed at urban, disadvantaged students as publishers claim?
- Are the various audiovisual devices more effective than printed materials?

Even more difficult to locate are reports of controlled research on *specific* materials. A few studies have evaluated the effectiveness of specific portable kits designed to individualize instruction and of specific audiovisual devices, but the findings have been equivocal or contradictory. As the amount and variety of material in secondary reading increase, the need to evaluate individual items becomes more and more apparent. It seems appropriate to ask such questions as:

- Is a particular basal series from Publisher A more effective in promoting reading achievement with a certain type of student population than a series from Publisher B?
- Is a series of workbooks from Publisher C more effective than a similar series from Publisher D?
- Is Publisher E's series for urban students more or less effective than Publisher F's series? than a basal series not designed for urban students? than conventional literature anthologies?

To some, studies set up to answer such questions may seem misguided, wasteful of teachers' time, even impertinent. They will note the problems inherent in an experimental study: the difficulty of controlling the teacher variable, the difficulty of minimizing the halo effect, the difficulty of assuring adequate statistical procedures, etc. However, most teachers, aware of the current amount and variety of material and of their responsibilities to students, will welcome research information in this area.

At this time in the development of reading programs in the secondary schools, teachers may have a responsibility to try out materials in informal experimental studies and to report their findings through the professional journals and organizations. Graduate students in reading might well address themselves to the challenging task, in master's level and doctoral studies, of designing controlled experiments to evaluate the effectiveness both of various kinds of materials and of specific books, workbooks, series, kits, programs, and audiovisual devices.

Making Effective Use of Materials

Materials for teaching reading in secondary schools are in relative abundance. Whether evaluated by controlled research or not, they can be used to advantage by teachers of reading. Some general suggestions for making the most effective use of materials follow.

Make sure materials are appropriate.

Many textbooks and accompanying materials are now available for special populations of students and are not intended by their authors for all secondary students. For example, materials designed for slower learners, below-norm readers, or urban students may be used successfully to supplement a developmental program but may be inappropriate for the majority of the students in the program. Teachers need to study all information provided by publishers to discover the purposes of the authors, the student population for which the books were planned, and the reading grade levels of the books; they should try the material with a sampling of students to discover if it is too easy, too difficult, of sufficient interest.

Take advantage of teacher's manuals.

Generally, the teacher's manuals or guides provided by publishers are a rich, though often overlooked, source of information on making best use of the materials. For teachers with little or no experience in the teaching of reading, many manuals provide an intensive "course" in the teaching of reading; they include discussions of research and theory as well as practical suggestions on teaching methods. For experienced reading teachers, manuals serve as valuable sources of ideas for teaching activities, exercises, bibliographies, and tests.

Use the supplementary materials.

Most textbook series are accompanied by a variety of additional materials such as workbooks, study helps, tests, recordings, and other aids. Usually, these are intrinsic parts of programs developed by the authors and publishers. To overlook them in organizing for instruction may be to deprive students of opportunities to achieve in reading.

Use a variety of materials.

Recognizing that students differ in ability, in achievement, and in the ways that they learn, experienced reading teachers try to provide many different kinds of materials in their classes. They use literature anthologies and basal readers, workbooks and individualized lessons, magazines and audiovisual devices; they use two, three, or more series of books and workbooks. They realize that materials which work for some students at one time may not be as successful with other students or with the same students at another time, and that, generally, the greater the variety of materials in the program the greater will be student growth in reading achievement.

Create materials.

Many successful reading teachers create exercises, activities, games, and other materials specifically for their own classes. Knowing the needs and personalities of their students, they prepare materials tailored to individual classes and even individual students. They mount on heavy paper, or duplicate, stories and articles from popular magazines and newspapers; they develop sequences of exercises in those reading skills in which they know their students need additional practice. Often such teacher-made materials prove more effective for some classes than published materials.

It may be said, in conclusion, that a wide range of material for teaching reading is currently available to teachers in the junior and senior high schools, that research on types of materials and on specific books, series, devices, and programs has not been extensive nor revealing, and that teachers may make most effective use of materials by making sure that what they use is appropriate for their classes, by taking advantage of teacher's manuals, by using the supplementary materials available to them, by using a variety of materials within their classes, and by creating materials designed to fit the needs and interests of their own students.

REFERENCES

1. *The ACE Program* (Glenview, Illinois: Scott, Foresman and Company, 1968).
2. *Adventures in Literature: Classic Edition* (New York: Harcourt, Brace & World, 1968).
3. Balish, Herbert, and Irene Patai. *The Way It Is* (New York: Xerox, 1967).
4. Blank, Theodore. "Audio-visual Devices for Teaching Reading," *Journal of Education*, 146 (April 1964) 75-93.
5. Brooks, Charlotte K., and others. *Holt's Impact* (New York: Holt, Rinehart and Winston, 1967).
6. *Craig Reader* (Los Angeles: Craig Research Incorporated).
7. *EDL Flash-X Tachistoscope*; *EDL Tach-X Tachistoscope* (Huntington, New York: Educational Developmental Laboratories).
8. *Gateway English* (New York: Macmillan, 1967).
9. Guiler, W. S., and J. H. Coleman. *Reading for Meaning* (Philadelphia: J. B. Lippincott, 1955).
10. Hanlon, Helen. "What We Know About Materials for Teaching Reading," in M. Agnella Gunn, ed., *What We Know About High School Reading* (Champaign, Illinois: National Council of Teachers of English, 1957).
11. Harris, Albert J., and Joseph C. Gainsburg. *Advanced Skills in Reading* (New York: Macmillan, 1967).
12. Herber, Harold L., and Florence Nolte. *Learning Your Language* (Chicago: Follett Publishing Company, 1966).
13. *Junior Scholastic, Senior Scholastic, Cavalcade*, and *Scope* (Englewood Cliffs, New Jersey: Scholastic Magazines).
14. Murphy, George E., and others. *Let's Read* (New York: Holt, Rinehart and Winston, 1962).
15. *The New Companion Series: Adventures in Literature* (New York: Harcourt, Brace & World, 1968).
16. Niles, Olive, and others. *Tactics in Reading* (Glenview, Illinois: Scott, Foresman and Company, 1967).
17. Pooley, Robert C., and others. *The Galaxy Program* (Glenview, Illinois: Scott, Foresman and Company, 1967).
18. *Read* (Columbus, Ohio: American Education Publications).
19. *The Reader's Digest* (Pleasantville, New York: Reader's Digest Services).
20. *The Reader's Digest Advanced Reading Skill Builders* (Pleasantville, New York: Reader's Digest Services).
21. Russell, David, and others. *Discovery Through Reading, Exploration Through Reading*, and *Achievement Through Reading* (Boston: Ginn and Company, 1967).
22. *SRA Reading Laboratory* (Chicago: Science Research Associates).
23. Seligson, Yemema. "Resources for Reading Teachers," *Journal of Education*, 146 (April 1964) 31-74.
24. Simpson, Elizabeth A. *SRA Better Reading* (Chicago: Science Research Associates, 1962).
25. Smith, Nila Banton. *Be a Better Reader* (Englewood Cliffs, New Jersey: Prentice-Hall, 1968).
26. Strang, Ruth, and others. *Teen-Age Tales* (Boston: D. C. Heath, 1959).
27. Turner, Richard H. *The Turner-Livingston Reading Series* (Chicago: Follett Publishing Company).
28. Whipple, Gertrude. *Upgrading Elementary Reading Programs* (Newark, Delaware: International Reading Association, 1966), p. 2.

What Does Research in Reading Reveal—

About Evaluation in Reading?

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RESEARCH from 1910 through 1965 bearing on the evaluation of materials and programs for the teaching of reading in Grades 1-3 is reviewed in Chall's *Learning To Read: The Great Debate* (2). This research used all types of evaluative instruments and procedures, and Chall's review is so comprehensive, critical, and compact that the writer of this section can neither add anything to it nor summarize it. He will therefore focus on the evaluation of reading programs above Grade 3 where, as Chall says, research is scanty and inconclusive. He will try to present a nontechnical account of ways in which teachers of reading can find out about the progress and difficulties of their students, and he will direct attention to certain problems and issues in the evaluation of growth in reading that have been neglected by research.

Reading Comprehension Tests

The standard instrument for the evaluation of almost all reading programs has long been the series of reading comprehension tests offered by all major test publishers. These tests present a large number of short passages and a few short poems of the kinds ordinarily read in the grades for which these tests are designed. The passages are not exclusively literary; they may include factual material taken from textbooks and magazine articles. Each passage or poem is typically followed by five to eight multiple-choice items designed to measure understanding, and students mark the choice they regard as the best. They usually record their choices on a separate machine-scorable answer sheet which can also be scored very quickly by hand through the use of a scoring stencil provided by the test publisher.

The score is usually the number of items answered correctly. Sometimes a "correction for guessing" is used: the number of "rights" minus a third or a fourth of the "wrongs" (not including "omits"), depending on the number of choices per item. There have also been numerous attempts to assign different weights to items in accordance with their difficulty, discriminating power, or presumed importance. It is uniformly found, however, that students come out in the same rank order (with the few exceptions one would expect by chance) whether or not there is any weighting or correction for guessing. Hence the preferred mode at present is to use the number of correct choices as the "raw score." The "correction for guessing" persists mainly because some students feel that it is not honest to choose an answer unless they are pretty sure that it is correct. Tell them not to be so scrupulous. In all but the easiest items good reading is a series of guesses ranging from hunches to near-certainties.

Scaled Scores

The "raw score"—number of right answers—is then translated into some kind of scaled score that will be more easily understood by the test user. He has to deal with scores on many tests of different lengths and degrees of difficulty, and it is hard for him to remember that a raw score of 22 on one test may be high while 38 on another is low and 16 on another is average. Hence he insists on scaled scores that convey such meanings directly.

The scaled scores that have been almost universally adopted for reading comprehension tests up to and sometimes through the senior high school are called "grade-equivalent scores" or "grade-level scores." The average score made by all fourth graders in the norms sample is called 4; that made by all fifth-graders is called 5. The distance between these points is divided into tenths, designated by numbers from 4.1 to 4.9. Unfortunately, the decimal fractions happen to coincide with the number of months in the school year. Hence a score of 4.2 is commonly interpreted as "fourth grade, second month" and a score of 4.6 as "fourth grade, sixth month."

The test publisher can also assign grade levels above or below the grades for which the test was designed. He may have one form for Grades 4-5-6 and another for Grades 7-8-9. He gives both of these to large groups just completing Grade 6 and just beginning Grade 7. Then he can tell what scores on the easier form are equivalent to what scores on the harder form. The same can be done at the next dividing line between Grades 9 and 10. After he finds average scores on these forms for each grade, he can report that the score made by a precocious sixth grader is equivalent to the average score made by tenth graders; hence this student is "four grades ahead in reading." He can also report that the score made by a retarded tenth grader is equivalent to the average score made by sixth graders; hence this student is "four grades behind." Although this way of interpreting extreme scores has a substantial foundation, it is well to remember that the precocious sixth grader never saw the tenth grade test; he got his high standing by doing extremely well on a test designed for Grades 4-5-6. Likewise, the retarded tenth grader had not tackled the sixth grade test; he did poorly on a test designed for Grades 10-11-12.

Although grade-equivalent or grade-level scores are probably the most easily understood of all scaled scores used in testing, they seem to the writer to have several unfortunate side-effects. The first is that the decimal fractions assigned to scores between the averages of two grades, when interpreted as "months," give parents, students, and even teachers an exaggerated impression of the magnitude of these differences. If a test has been given in the ninth month of Grade 4 and a student comes home with a score of 4.5, the parent is likely to think, "Four months behind in reading! How will he ever catch up?" The answer may really be quite simple: something like "Get two more questions right on the test." That much difference between two equally able students can occur if one pauses to draw a long breath during the test while the other does not. But the parent, the student, and sometimes even the teacher (who ought to know better) quite often get the impression that the difference can only be made up by four months of hard work.

The very high and very low scores

that are interpreted as standings above or below the grade levels for which the test was designed must also be taken with a grain of salt. For example, when the daughter of the writer was in Grade 7 and took a reading test designed for that grade, her score was interpreted as "superior to that of the average twelfth grader." Right away she wanted to be transferred to Grade 12. Knowing that the average twelfth grader had never seen her test, and she had never tackled a twelfth grade test, I simply handed over some twelfth grade textbooks and asked her to sample them and tell me what they meant. She came back rather downcast and said that she could not make head or tail of them. Given the procedures by which these grade-level scores are computed, I do not see what else we could say about a student who knocks the top off the scale for Grade 7, but it is untrue as well as unwise to give the impression that this student is ready for twelfth grade work.

Another misunderstanding of these grade-level scores furnishes ammunition for critics of schools in disadvantaged areas. It is sometimes argued that their students are two years behind in reading in Grade 4 but four years behind in Grade 8, and the longer they remain in school, the farther behind they get. Hence, it is said, the fault is clearly that of the school rather than that of the home or neighborhood. Although one wishes that these schools could do more to overcome the initial handicaps of these students, the increasing disparity as time goes on can hardly be held against them. Suppose one boy habitually walks four miles an hour while another walks three. At the end of the first hour the slow walker is one mile behind; at the end of the second, two miles behind. The increasing distance between the two boys can hardly be attributed to what happened during that second hour. Similarly, if scores on reading tests are interpreted as showing the rate of learning in well-to-do and poverty-stricken areas, the increasing distance between these groups as the years go by cannot fairly be attributed to the incompetence or neglect of the schools.

It is understandable but shortsighted for disadvantaged groups to resist the use of any tests that show their children to be less competent in learning than children who have every advantage. If poverty did not really hurt people and especially their children, there would be no philosophical reason to get rid of it. It might be more comfortable to be well off, but that reason would not have very much weight with either Socrates or Jesus. But if poverty can be shown to hurt children—to keep them from learning what they need to learn in order to become full partners in our civilization—then even the philosophers will enlist in the war on poverty. The trouble may be that the disadvantaged groups believe that the test scores will be used as evidence of their innate and unalterable inferiority—not as evidence of what poverty does to people. Although this fear has some basis in what has happened to them in the past, it ought soon to be overcome by the more intelligent and constructive use of test scores. This particular charge can be refuted in almost any ghetto neighborhood in which there are groups of different racial stock, such as Negroes and white Puerto Ricans. Both are handicapped in school by generations of poverty and mistreatment, but genetically they are quite distinct.

Although educators and responsible leaders of disadvantaged groups ought to know the score in regard to progress in learning, one may rightly feel qualms about exposing the children and their parents to the same information. We hear a great deal nowadays about the importance of a positive "self-concept" as motivation to do well in school. This new term was probably introduced to avoid the unfavorable connotations of the older term "pride," but proper pride in one's work and one's standing among peers is undoubtedly what is meant. We cannot expect these children to want to do well if we hurt their pride continually by the very terms in which we report their achievement. Given the circumstances in which they live, it is unrealistic to expect them to do as well as more prosperous children in such basic tasks as learning to read. Hence the great majority are condemned to hearing that in Grade 4 they are two years behind in reading and in Grade 8 they are four years behind. Nothing that they or their teachers can do in the near future will enable them to catch up. Why, then, do we need to attach such damaging labels to their achievement scores? What equally meaningful but less invidious labels might we adopt?

Some years ago the writer tried to promote the use of "stanine" scores in reporting school achievement in a little pamphlet entitled *Shortcut Statistics for Teacher-Made Tests* (7), over 300,000 copies of which have been distributed by ETS. These "stanines" were developed for the testing program of the Army Air Force in World War II and proved adequate to handle all the data assembled by that program. "Stanine" scores range from 1 (low) through 5 (average) to 9 (high), and each "stanine" covers half a standard deviation. It is unnecessary to explain the latter term because the writer found it possible to get a close enough approximation for all practical purposes by assigning the following percentages of scores to each stanine: 4, 8, 12, 16, 20, 16, 12, 8, 4.

After about five years of campaigning for the use of stanine scores, the writer noticed that even the teachers in his experimental studies abandoned them as soon as he and his research money were out of sight. They were so used to thinking of school achievement on a five-point scale—the familiar A, B, C, D, F—that they found it hard to adjust to a nine-point scale. This finding led the writer to consider the possibility of defining these five intervals in terms of the mean and standard deviation of scores made by the total population of each grade within schools. It proved to be easy to do so by assigning the following percentages of scores to these intervals: 5, 20, 50, 20, 5. The middle scores (medians) in these intervals are almost exactly one standard deviation apart. To avoid confusion with letter grades that are defined differently by each teacher, the writer urged the use of numbers from 1 (low) to 5 (high) to denote these intervals. When finer distinctions than these are needed and warranted, they can be expressed as tenths of the standard deviation.

This five-point scale, used only to report scores on standardized tests and important departmental measures, proved to be much more acceptable to teachers than the less familiar stanine scores. If some of them think of it as equivalent to F, D, C, B, A, they are not far wrong. It was used in the tryout of the Cooperative Evaluation Program reported in the 1967 Yearbook of the Association for Supervision and Curriculum Development (ASCD), *Evaluation as Feedback and Guide* (10). The only serious objection was to the idea of "grading on a curve" within classes, which often misrepresents the achievement of classes of high or low ability. This objection does not apply to the total population of a grade within schools that are large enough to adopt this type of scale. It even provides a rational basis for determining what scaled scores should be assigned to exceptional classes on important measures that cannot be given to the entire grade. Suppose an Advanced Placement Class in English has taken a test on a literary work that no other class in that school could read. Of the tests taken by all students, those most likely to predict scores on the literature test are reading comprehension and vocabulary. Suppose that scaled scores of the Advanced Placement Class on these tests range from 4.5 to 5.9; the average is 5.2; and half the scores lie between 4.9 and 5.5. Scaled scores on the literature test can then be assigned in these proportions. All of these are equivalent to a grade of A and will have that weight in determining rank in the graduating class, but it is still possible to discover that some of these very good students did better than others on the literature test.

Now let us return to the disadvantaged students who have been blighted for years by reports that they are two to four years below grade level in reading. If we substitute scaled scores that indicate their position among all students of that grade in their own school, there will be just the usual distribution of high, middle, and low scores that we associate with achievement in all schools. There will not be 70 per cent or more with scores proclaiming that they are hopelessly behind their contemporaries in reading. Research people in the central office of that district must know how these students compare with more favored students of that district and throughout the country, and they can easily find out from confidential tables of equivalent scores. But it serves no useful purpose for these students or their parents to know it. Their real competition lies among students of their own and similar neighborhoods who have roughly equal opportunities to learn. We are so hungry for enlightened and responsible leadership in these disadvantaged areas that students who stand high among their peers deserve special opportunities, regardless of where they stand among more favored students.

When we hear that a sandlot baseball player bats .300 against appropriate competition, we never say, "Oh yeah? What would he bat against the Giants?" That comparison is meaningless as well as insulting; he has no occasion to bat against the Giants. But we also know that a boy who bats .300 in his own league has a better chance of growing up to bat .300 against the Giants than another boy who bats .100 in his own league.

It is high time that we adopted similar standards in education. It is how a student bats in his own league that counts —not how he might bat in a league that he could not conceivably enter in the near future. Grade-level scores in reading based on national norms can only hurt the pride and depress the motivation of disadvantaged students who already have two strikes against them. At least in these areas such scores should be abandoned.[1] The writer would also contend that they ought to be abandoned in more favored districts that are lulled by such scores into unjustified complacency. They ought to be doing much better. In the writer's opinion, our national norms in reading are a national disgrace. Some evidence supporting this opinion will be presented later.

Diagnosis

In his summer courses in measurement, the writer is often exasperated and then amused by what teachers expect of standardized reading tests. First, the test must not cost more than twenty cents per copy, and even this price was accepted only after it became possible to reuse the test and use up only the answer sheets. Second, it must not take longer than thirty-five or forty minutes to administer. Third, it must claim a reliability of .90 or near it. These teachers do not really know what this means or why it is important, but they insist on it. Since test reliability is dependent on test length, this demand is contradictory to their prior demand for short tests, and test publishers are sometimes driven to rather shabby expedients to satisfy both demands simultaneously. Fourth, the test must be diagnostic. It must not only show which students are good readers and which are poor; it must also reveal the specific needs and weaknesses of each student.

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[1] Some bureaucrats argue that this cannot be done because disadvantaged students frequently transfer from one school to another. If their test scores are based on their standing within the school from which they came, the bureaucrats say that they will not be able to place them properly in the school to which they go. It takes only a few seconds to translate previous scores into standings within the new school by reference to a confidential table of equivalent scores. To avoid this slight trouble for the relatively few students who transfer, are the bureaucrats willing to hurt the pride of most students in both schools whenever they take an important test?

Given the three prior conditions, this fourth demand is absolutely impossible to satisfy. It is hard enough to read satisfactory reliability for the total score within forty minutes; to furnish reliable part-scores on four or five components of reading ability would take more time and cost more money than either teachers or administrators are willing to consider.

Nonetheless, in one workshop the writer and his students were able to piece together a long battery of reading tests that could be regarded as diagnostic and to administer it to a group of students. The scores revealed a great many weaknesses, but these teachers still complained because the test afforded no clues as to what ought to be done about these weaknesses. "What good is it," they said, "if it gives no direction to our teaching?"

At this point the writer blew up. "You people want an awful lot for twenty cents," he said. "It took me four years of graduate work and then about ten years of teaching experience before I found ways to diagnose reading difficulties and remedy them. Even now it takes me at least a month of working with students both in class and in small groups to understand their difficulties and several months more to find ways to help them. At that, I probably miss half their difficulties and can do very little about half of the difficulties that I discover. Do you people expect all this for twenty cents per student? in forty minutes? with a reliability of .90? Don't be silly."

There is even a further problem of which these teachers were unaware. Reading comprehension has thus far resisted the most determined and sophisticated efforts to break it up into such components that a student may be strong in one, average in another, and weak in a third. Reading is a highly unified skill. If it has any parts, they are so intimately dependent on one another that a student who is good in one apparently has to be about equally good in all, and another student who is poor in one is likely to be about equally poor in all. That, with minor reservations, is the conclusion of all careful studies of this problem above the stage of beginning reading (3, 4, 6, 8, 9).

The techniques used in these investigations were too complicated and mathematical to explain briefly, but the evidence is convincing: all the more so because these investigators (with the exception of the critic, Thurstone) set out to prove that there were independent components of reading comprehension and were disappointed by their findings. Davis, it is true, still insists, in spite of Thurstone's criticism, that some of the "factors" he thought he found are real, but he readily admits that they are "tiny residuals." One of them, "knowledge of literary devices and techniques," illustrates what he means.

After reading these studies, the writer would feel safe in regarding only breadth of vocabulary, reading rate, and reading comprehension as moderately independent in that a student who stands highest in one will not necessarily stand highest in the others. A student who stands high in one will, however, tend to stand fairly but not equally high in the others. This is tantamount to saying that their intercorrelations are fairly high but not high enough for them to be regarded as different aspects of the same ability.

Suppose, then, that we could develop a perfect diagnostic test of reading ability: one that could provide reliable scores on twenty different elements in reading that are at least logically distinguishable. Suppose that we gave this test to all remedial students in a large high school and waited hopefully to find out what was wrong with each of them. What should the above findings lead us to expect? That the poorest reader would stand lowest in all twenty; the next poorest reader would stand next lowest in all twenty, and so on—with only the few exceptions that could safely be attributed to chance. Hence we should be no further along than after we had first identified the poor readers by a much shorter test. What do we need to work on? The only answer that such a test would be likely to give is "Everything." Hence these research findings pretty well knock the whole idea of a diagnostic reading test in the head.

The writer intimated above, however, that after ten years in the classroom he found some way to discover at least a few of the problems and difficulties of his remedial students and some way to help them overcome at least a few of these weaknesses. What was that way? How did he do it?

He based his whole remedial program on a long series of multiple-choice tests that were taken as homework and discussed the following day in class. As a testing man he had a large number of rather interesting reading comprehension tests left over from various studies as well as old forms of tests that had been retired from active use and other tests that were not good enough to publish as tests but good enough for use as instructional material. Most of them were based on fairly long passages and on short but complete stories and essays, so that they sustained interest better than exercises based on snippets. The content and form of these passages varied a good bit from week to week. Although these features were helpful, they were not essential; almost any series of reading tests would probably have yielded similar results.

Students took these tests as homework and recorded their answers in the test itself rather than on a separate answer sheet. They could do between forty and sixty items without hurrying in the time ordinarily devoted to homework, but we could discuss only ten or twelve in class. Hence the first problem was how to find the items that ought to be discussed. The writer did this simply by calling out the numbers of the items and asking the class which answer they had chosen. Each student held up one, two, three, or four fingers to indicate his choice. If most of the class wanted answer 3, and that was keyed as correct, he said, "Yes, three," and passed on—unless someone insisted on arguing about it. But if one faction wanted answer 2 and another wanted answer 4, he did not indicate which was keyed as correct but said something like this: "I see that we have a fight on our hands. Bill, tell us why you chose 4. . . . Mary, why did you choose 2? What do you have to say to Bill's argument? Bill, what have you to say to Mary? Anyone else? This is not a private fight, you know; we need to look at as many different reasons for these answers as you can think of."

By this time hands would usually be waving all over the room, and all the teacher had to do was to recognize those who wanted to speak. He tried to refrain from expressing any opinion of his own and not to indicate which arguments he favored by so much as the flicker of an eyelash. As soon as the argument slackened or became repetitive, he said, "This has gone far enough. We now have enough reasons out on the table to decide. How many now favor answer 2? answer 4? The fours have it. If you still want to argue, take it up later with someone who chose 4. Let's get on."

Another teacher of this course preferred to have his students trade test papers and mark each item right, wrong, or omitted while he read the answer key aloud. Whenever a student marked an item wrong, he held up his hand. The teacher recorded the number of upraised hands for each item on his copy of the test. At the end he said, "The only items that gave much trouble were 4, 9, 11, 16, 21, etc. Let's take up those first and then turn to others that anyone wants to argue about." The controversial items were then discussed in the same way as in the writer's classes. This procedure lost a little in suspense because students knew before they presented their arguments that their choice had been keyed as right or wrong, but most of them were belligerent enough to defend their choice even if the key said that it was wrong. This teacher always got through the questions on which there was the greatest difference of opinion, while the writer sometimes did not reach the questions that might have been most rewarding. Both procedures, however, yielded red-hot discussions of items on which students disagreed and showed them that some of their interpretations were opposed not just by the anonymous testmaker but also by some of their best friends.

These discussions revealed more clearly than even a perfect diagnostic test the kinds of reasons that led these students to choose interpretations that others regarded as untenable. A diagnostic test usually tries to locate weaknesses by presenting different types of items: ten directed toward weakness A, ten toward weakness B, and so on. But as one listens to class discussions, it becomes apparent that it is not the type of item that discloses the weakness; it is the type of reasoning that students bring to these items. One is repeatedly led astray by reasons M and N, another by reasons O and P, in what seem to be quite different types of items. These mistakes in reasoning need to be uncovered, not a tendency to go wrong on any particular type of item.

If we could classify the reasons for choices that are most frequently expressed and embody them in a test, there might be renewed hope for a diagnostic reading test. To the writer, however, these reasons now seem to be so numerous and so different from student to student that any given student might find in such a test only two or three of the reasons that guided his own choices. Whenever his own reasons were not listed, he would be forced to choose among other reasons that are frequently expressed, and most of these would probably strike him as stupid.

Why should we bother? These reasons come out freely enough without any contrivance on our part in class discussions of the sort just described, and the teacher need not worry very much about the best way to clear up the fallacious reasons. For the most part the class will take care of them, and students are more likely to take to heart the opposing argument of a classmate than of the teacher. The writer has only this evidence: whenever he lost patience and simply told the class which answer was correct and why, they promptly forgot it and never referred to it again. But if they figured it out for themselves, they would often bring up that case as a precedent in discussing similar problems in other texts.

If other teachers would like to experiment occasionally with this method of diagnosis and treatment, they must either find suitable tests or make their own. Sometimes the director of testing in their district can furnish single copies of tests no longer in use and permission to reproduce them, and others may be found in workbooks and manuals. The questions for discussion that follow selections in many anthologies can be turned into multiple-choice items by supplying the kinds of answers that one frequently hears in class. The writer prefers multiple-choice items to open-ended questions for this sort of treatment because they require students to make definite choices, and one can tell immediately whether there is a difference of opinion that calls for discussion. In reproducing such items, always number the responses 1, 2, 3, 4—no matter what was done in the original test. If you letter the responses A, B, C, D, you will nearly go crazy trying to distinguish B from D in classroom conversation. The numbers also make it more natural for students to hold up one, two, three, or four fingers to indicate which answer they chose.

Independent Reading

Between 1958 and 1965 high school enrollment increased from eight million to over twelve million students, and every one of them took English. To handle this influx of students there should have been a fifty per cent increase in college majors in English some years earlier, but instead there had been an actual decline. Consequently, by 1960 high school teachers of English in many parts of the country were meeting 180 to 200 students daily—five classes with thirty-six to forty students in each class—and neither the teachers nor the students could stand it.

To alleviate this desperate situation the Ford Foundation provided a generous grant that enabled the writer to demonstrate in two large cities that high school English can be taught quite acceptably with one large-group presentation, two small-group discussions, and two periods of independent reading per week. The independent reading enabled teachers to divide each large class into two sections of eighteen to twenty students and teach one section on Tuesday and Wednesday, the other on Thursday and Friday. The section that was not in class went to an independent reading room, usually a converted study hall accommodating sixty to eighty students, stocked with at least twelve hundred books, mainly paperbacks, and supervised by part-time "English assistants"—college-educated housewives who were selected and trained by the English teachers with the help of school librarians. They were assisted by student aides who checked books in and out and kept them in order on the shelves. The total cost of maintaining the independent reading rooms amounted to about one-fourth the cost of the same number of student-hours of instruction.

This is not the place to consider arguments for and against independent reading as a regular, required part of the English program of classes that read well enough to profit by it. Here it can be considered only as a means of evaluating the reading program. But since some teachers imagine that they have an independent reading program when they do not, the following features of this program should be mentioned:

1. The reading is done in rooms set aside for this purpose—not in the regular English classroom.
2. Students go to these rooms on a regular schedule, usually twice a week, and attendance is checked.
3. Doing homework for other classes during these periods is forbidden.
4. If a student is ejected for doing homework, creating a disturbance, or sleeping, he must make up that period during a free period. If this happens several times, he is transferred to a class that does not have independent reading.
5. These rooms have an initial stock of at least twelve hundred books, with several copies of the most popular books, and one hundred or more titles are usually added each year. There is a good deal of nonfiction but no reference works.
6. These rooms are supervised by someone other than the English teacher.
7. Not all classes are admitted to this program but only those that—in the judgment of the teacher and department head—read well enough to make good use of it.
8. Books may be checked out.

9. Conferences are held only in glass-enclosed cubicles.
10. A record of what students read and what they think of it is kept on 3 x 5 cards, but there are no full-length book reports.
11. There is usually no separate mark for independent reading in the report card, and an effort is made to keep grade-getting out of it. The teacher's impression of the extent and quality of this reading may, however, influence the grade in English.

These points are mentioned chiefly because some teachers say, "Yes, I have an independent reading program. I require a report on one outside book per month." This is hardly the way to build the habit of reading books for pleasure. Other teachers say, "Yes, I have an independent reading program but without all the folderol that you consider necessary. I have a three-foot shelf of books in my own classroom, and once a week I let the students just read while I call one after another to my desk for a short conference. Unfortunately I do not have enough books to check out, and I would not want all that bookkeeping in any case."

To anyone who has seen a genuine independent reading program, the latter procedure seems only a way to keep students quiet while holding a makeshift substitute for individual conferences. Letting the students "just read" is hardly the way to refer to their central intellectual obligation as educated men. The stock of books is pitifully inadequate, and what can be read during the period is only enough to "hook" the student; then he ought to check the book out and finish it. The buzz of conversation at the desk is distracting, no matter what the teacher says to the contrary; and only the most superficial conferences can be held in this goldfish-bowl setting.

Book Cards

When a student finishes a book or decides to give it up, he fills out a 3 x 5 card with something like the following headings:

Name____________________ Grade ____ Date ________

Author, title ______________________________

Type________ Rating 1 2 3 4 5 Difficulty E M H

Comment:

The student encircles a number after "Rating" to show how well he liked the book in comparison with others he has read, and a letter after "Difficulty" to show whether he found it easy, medium, or hard to read. After "Type" he inserts a number drawn from a list like the following:

FICTION

1. Story about boys and girls
2. Story about animals, nature
3. Story about school life
4. Fantasy, magic, supernatural
5. Sports, hunting, outdoor life
6. Adventure (western, sea, war)
7. Success story
8. Humorous story
9. Detective, mystery, spy
10. Science fiction
11. Love and romance
12. Historical novel
13. Tragic, satiric, problem novel
14. Unclassified novel
15. Book of short stories

NONFICTION

16. Book of information
17. Sports, games, outdoor life
18. Hobbies, practical arts
19. Vocations
20. Travel, exploration
21. Biography, autobiography
22. History
23. Social science
24. Science, natural history
25. Philosophy, religion
26. Music, art, architecture
27. Essays, criticism
28. Plays
29. Poems
30. Unclassified nonfiction

All students keep this list in their notebooks, and it is displayed wherever these "book cards" are filled out. Teachers do not worry very much about accuracy of classification. If an eighth grade boy classifies a book as an adventure story and an eighth grade girl classifies the same book as a love story, that shows how they read it. The "type" is intended only to give other students a rough idea of what sort of book it is.

The most important item on the card is the "comment," which may be only a phrase or two or may run over to the back of the card. The first comments students write may be stilted and conventional, designed to impress the teacher, but they soon learn to write their comments for the benefit of other students who are looking for something to read. Then their comments become racy, original, candid, and revealing. Some of them make the teacher's hair stand on end, but it is agreed that there must be no reprisals or these cards would lose their value for other students. These cards are usually filed alphabetically by name of student in a separate box for each grade, and in every period of independent reading one sees students looking up their friends to find out what books they have been reading and what they thought about each book. If a student says that a book is one of the best he has ever read, but a friend who accepts his recommendation finds it dull and worthless, there is likely to be an argument that will dispose both students to write more candid and critical comments in the future.

Some teachers ask whether students have actually read the books recorded on these cards, but those who supervise independent reading have no such doubts. They see the students reading these books and often discuss what they have been reading when these students ask for advice on what to read next. It is important, however, to have the cards filled out as soon as possible after each book is finished or given up. When a student returns a book, if he does not reach for a card himself, the student aide hands him one and says, "I can't check it in until you fill out this card." After he has done so, the aide may say, "Have you read any other books that you got at home, or bought, or borrowed from a friend or the public library? If so, please fill out cards for them." Some English teachers have tried to secure such a record of independent reading by passing out book cards once a month in class and having students fill them out from memory. That simply does not work. The reluctant readers prepare for these occasions by asking their friends to tell them the name of a book and what they ought to say about it.

Students do not resent filling out these cards in the independent reading room as they resented the former full-length book reports because they take only a minute; they are not marked or criticized by the teacher; and they help these students and their friends both to find books that they are likely to enjoy and to avoid other books that their classmates have condemned in such terms as difficult, childish, mushy, far-fetched, boring, and worthless. They even furnish a mild incentive to read, for if a student finds that most of his friends have already read sixteen books while he has read only four, he may put on quite a spurt of reading to catch up.

These cards have also led to one of our most important and most disturbing findings. Many junior high schools have reported that ninth graders turn in only two-thirds to three-quarters as many book cards as eighth graders—even in favored suburban areas and in spite of the increased opportunity for reading provided by the independent reading program. These reports recalled the community studies of reading conducted by Douglas Waples of the Graduate Library School of the University of Chicago during the thirties. He never relied on questionnaires but sent out field workers to interview everyone in a scientifically selected sample of homes to find out what he had read within a stated period, where he got it, what he thought of it, and so on. Waples frequently stated in his lectures that the greatest amount of book reading in any American community he studied was done by eighth graders; above this point reading declined with each increment in age and education until the great majority of American adults read hardly any books. Then as now many librarians disputed his findings and cited their increased circulation as contrary evidence, but Waples showed that libraries were used by a relatively small minority.

Since that time the "paperback revolution" has vastly increased the number of books sold. Between 1940 and 1960, for example, while our population increased 37 per cent, newspaper sales increased 45 per cent, magazine sales 110 per cent, and the number of books sold a whopping 445 per cent. In 1940 Americans bought an average of one book a year; in 1960, slightly more than five. One can see why when one examines the paperback bookshelves in any drugstore. Books are now accessible and inexpensive; many are spicy; and their pocket size attracts many who are afraid to tackle large, heavy books.

We thought that this new development had completely changed the picture of reading habits as reported by Waples during the thirties, but apparently the bulk of this book-buying and presumed book-reading is still done by a relatively small minority. A nationwide Gallup Poll reported in *Time* magazine as recently as 1964 revealed that 77 per cent of the American adults questioned said they had not read a book during the past year, while of a comparable sample in West Germany only 33 per cent said they had not read a book. It is not clear from the report whether these figures referred to the year in which they were reported (although it is hard to imagine why *Time* would dig up earlier figures), but there is no doubt that the very junior high schools with which we have been working since 1960 have reported the same sharp downturn in the independent reading of self-chosen books that Waples found, and at the very same point, the end of Grade 8.

English teachers in these schools had ready explanations for this decline. First they said it was television, just as earlier teachers said it was movies and then radio. Although it is true that teen-agers watch television an incredible number of hours per week, they watch no more in Grade 9 than in Grade 8, when they read far more books. Next these teachers said it was dating and other social activities, but it was hard to believe that fourteen-year-olds date enough to interfere seriously with reading. Then these teachers blamed the increased homework of Grade 9. This may indeed be a factor, since Grade 9 is still widely regarded as the end of childhood and the beginning of the high school "grind," and this may be the first point at which many teachers feel virtuous about assigning as much homework as the traffic will bear. It turned out, however, that the students who did the most homework were also those who read the most books.

What goes on at this point that might affect reading? Biologically it is the onset of puberty. This may be the point at which average and below-average readers finally have to make a transition from juvenile to adult books if their reading interests are to continue. They cannot go on indefinitely reading the series of adventure stories and school stories that are popular with younger students. They now regard such stories as "kid stuff." But many seem to have grave difficulties making the transition to books written for adults, and this may be a harder step than we realized. As a testing man the writer has had to pore over item-analyses of many reading comprehension tests that are given at this level, and he has often remarked that if typical passages from typical adult books really meant what eighth graders say they mean in these tests, then nobody ought to read them. They would make no sense at all.

Some teachers misconceive this problem as "the transition from juveniles to the classics." As soon as one stops to think about it, one can see that this is too big a step—at least for independent reading. It may have led us to introduce students to adult reading through authors like Scott, Eliot, and Dickens when we should have used authors like Agatha Christie, Carter Dickson, Rex Stout, P. G. Wodehouse, Clarence Day, and James Thurber. It also leads to the use of condensed and rewritten versions of the classics for students who obviously cannot take them in their original form. Although the writer has no high regard for the sanctity of literary texts, he cannot regard this rewriting as a solution of the problem these students face. Their problem is to get from books that have been deliberately written down to their level up to books written for adults. If one takes classics that are hard reading for most adults and deliberately writes them down to the level of these students, one has not dealt with their problem at all. It would be far better to use adult authors of wide popular appeal, regardless of their literary merit.

We are now trying to discover the particular difficulties in adult books that baffle, discourage, and finally defeat the less capable readers. One that is so obvious that they themselves are aware of it is the harder vocabulary. Both authors and editors of juveniles continually substitute easier words and expressions for those that young readers may not understand, but adult authors make no such concessions. We have done something about this problem by finding out which words in the first twenty thousand in frequency they do not know and by providing a series of programmed workbooks for Grades 9-12 on words that were missed by 30 to 60 per cent of a large sample of college freshmen (5). Many teachers would argue that we should have provided this help for Grades 5-8, but we felt that separate programmed exercises on vocabulary (apart from reading) would go down only with students whose vocabulary problems were beginning to hurt, as they do in Grade 9 and above.

Other possible difficulties awaiting investigation are the longer and more complex sentences of adult books, the more complicated story line, more complex characters, literary forms and devices, relation of parts to the whole, interrupted time sequences, disagreeable incidents and characters, views contrary to one's own, unfamiliar periods and settings, nonliteral meanings, irony and satire, imagery and symbolism, divining the author's purpose (not only in general but also his reasons for doing this or that), and finding parallels within one's own experience to the situations, characters, and emotions portrayed in books. It should be said that we have not yet substantiated our hypothesis that difficulties in the transition from juvenile to adult books account for the decline of independent reading above Grade 8 that has been reported to us. But we feel that it is worthwhile to pursue this hypothesis because whatever we discover about the particular difficulties of adult books will contribute to teaching even if it turns out that we lose our book readers in Grades 9-12 for some other reason.

Tests on Whole Books That Are Widely Taught

Standardized tests of reading in this country go no farther than the passage and the short poem. A few tests on whole works are offered by some of the smaller test publishers but are not taken seriously by either teachers or testmakers. Their questions are of the order of who-did-what; they are unrelated to the objectives of the study of literature; and they do not bear any of the usual signs of expertness in test construction. The College Entrance Examination Board has not offered any tests on specific literary works since the thirties for a number of reasons. It does not wish to be accused of dictating the program of secondary schools; the diversity of literary fare in American high schools makes it hard to choose suitable works; and any works set for such a crucial examination would be ruined by overemphasis.

Examining boards in Great Britain have not avoided charges of stultifying the teaching of literature even though they use questions on "set books" that require written answers which have to be graded by large panels of examiners. One hears of endless drill on the few books set for the examination, anticipating every question that might be asked, to the extent that one examiner remarked, "I have examined some very competent teachers in my time." Some teachers, we are told, even dictate lists of "beauties of the work" to be memorized by sudents in case a question on "appreciation" is asked.

Some years ago it occurred to the director and editor of Cooperative Tests, Donald Melville and Scarvia Anderson, that the baneful effects of required examinations on literary works might be avoided, and information on the difficulties that students experience in whole works might be secured, if teachers were offered a very wide choice of tests on the books that are most commonly taught in Grades 7 through 12. These tests would never be used in any required program but would be offered for sale to teachers who were going to teach some of these works in any case, and who would not mind using pretested questions that had been written by gifted teachers of these works and reviewed by competent critics. A nationwide survey of public, parochial, and independent schools in 1964 yielded a list of 25 major literary works that are most frequently taught in these grades (1). Officers of the National Council of Teachers of English suggested the names of teachers who had a particular interest in each of these works and who were likely to write good test items. They also suggested two critics for each test: one a scholar in the field represented by each work to make sure that good questions were asked and the keyed answers were correct; the other a teacher to make sure that the questions were of about the right level of difficulty and in line with the objectives of the study of literature. Each test author submitted enough objective items to make two parallel tests with some items left over, and these items were conscientiously reviewed by the two critics. If their criticism of an item could not be obviated by a change in wording, the item was dropped.

After some further work on these items by members of the Test Development Division of ETS, these drafts were turned over to the writer and his assistant for the final editing and tryout. They had both been teachers of literature before they went into testing, and their interest in discovering the types of difficulties in adult books that alienate the less capable readers made this a research project to which both were willing to devote several years. They first took a large sample of items from all twenty-five tests and made an outline of the types of questions that had been asked. This outline may be regarded as a set of objectives for the study of literature, based on the engagement of twenty-five gifted teachers and fifty critics with the literary works that are most widely taught. Thereafter the questions asked about each work were checked against this list, and if any category was overlooked or inadequately represented but was applicable to the work, questions of this sort were added. If a category was over-represented without being called for by the nature of the work, some of the least promising items of this sort were deleted. This does not mean that all twenty-five tests were forced into the same mold with a fixed proportion of items in each category. It was recognized that some works lend themselves to certain types of items and other works to others. These differences were respected, but an effort was made not to overlook or overemphasize any category by inadvertence. The editors also permitted themselves to add a few questions suggested by their research interest in the difficulties of young readers in their struggles with adult books.

At least twice as many items as can be used were prepared for each work and assembled in four tryout forms with from thirty-six to forty-four items in each form. Those on ten works have been tried out in representative high schools during the 1968-69 school year, and those on ten other works are scheduled for tryout 1969-70. Work on the remaining five tests has been postponed for a number of reasons but chiefly because there were so few tests for Grades 7 and 8 that it was feared that they might have a restrictive effect on the curriculum. Hence publication of tests for these grades has been postponed until a larger number of tests can be offered. The first tests in this new series will therefore be designed for Grades 9 through 12 and will cover the following works:

English novels: *Pride and Prejudice, Return of the Native, Tale of Two Cities, Silas Marner, Ivanhoe*

American novels: *Scarlet Letter, Huckleberry Finn, Moby Dick, Red Badge of Courage, Bridge of San Luis Rey, Old Man and the Sea*

Shakespeare: *Hamlet, Macbeth, Julius Caesar, Merchant of Venice*

Other works: *Pygmalion, Our Town, Idylls of the King, Odyssey, Oedipus the King*

Other titles will be added as soon as they are widely taught. If we had had a completely free choice, some of the titles in the present list might have been changed. *Silas Marner*, for example, is not one of our favorites, but it is impossible to get around the fact that no other literary work except *Macbeth* is more widely taught. At that, it is an eminently teachable little book, and after we had seen the questions submitted by a man who likes to teach it, we were almost reconciled to its inclusion.

The list as a whole should not have any restrictive effect on the literary offerings of secondary schools. Teachers who make any use of externally prepared tests will probably select only one per year for each class, chiefly to find out how well they are doing in comparison with similar classes in other schools. If the test on one work is not to their liking, they will probably be able to find another to serve this purpose.

The test items that survive tryout will be published in two parallel tests on each work, similar in content and equal in difficulty. One may be used as a study test. It may be administered as soon as the first reading of a work is completed, prior to any discussion, to find out what the students have been able to do with it on their own and what will require study, discussion, and instruction. If a class is unable to complete a first reading without jogging, a certain number of questions may be covered in each assignment and discussed the following day in class. In either case the students will know the kinds of questions that will appear in the final test, and they will be no harder than those in the study test. With this amount of notice and preparation, the final test should not be a traumatic experience, and the difference between the initial and final averages will show both the students and the teacher how much improvement the study of the work has brought about. Over the long haul, the whole series of tests should reveal the kinds of difficulties that students experience in whole works and the extent to which these difficulties are overcome by various types of instruction. If there is any fear that some teachers will practically teach the answers to the final test in order to make a good showing, the department head may have to keep the final test in his own possession and have it administered under his supervision in some large room such as the auditorium. But when there is a good spirit in the department, this will not be necessary. The tests ought to be regarded as an honest effort to find out why we lose our book readers in Grades 9-12 and what can be done to prevent it. They should also improve teaching by showing the kinds of questions that our best teachers ask about their favorite works.

References

1. Anderson, Scarvia B. *Between the Grimms and "The Group": Literature in American High Schools* (Princeton: Cooperative Test Division, Educational Testing Service, 1964).
2. Chall, Jeanne. *Learning to Read: The Great Debate* (New York: McGraw-Hill Book Company, 1967).
3. Davis, F. B. "Fundamental Factors of Comprehension in Reading," *Psychometrika*, 9 (September 1944) 185-197.
4. Derrick, Clarence. "Three Aspects of Reading Comprehension as Measured by Tests of Different Lengths," *Research Bulletin 53-8* (Princeton: Educational Testing Service, 1953).
5. Diederich, P. B., and S. T. Carlton. *Vocabulary for College, Books A, B, C, D* (New York: Harcourt, Brace & World, 1967).
6. Hunt, Lyman C., Jr. "Can We Measure Specific Factors Associated with Reading Comprehension?" *Journal of Educational Research*, 51 (November 1957) 161-172.
7. *Shortcut Statistics for Teacher-Made Tests* (Princeton: Educational Testing Service).
8. Thurstone, L. L. "Note on a Reanalysis of Davis' Reading Tests," *Psychometrika*, 11 (September 1946) 185-188.
9. Vernon, P. E. "The Determinants of Reading Comprehension," *Educational and Psychological Measurement*, 22 (Summer 1962) 269-286.
10. Wilhelms, Fred T., editor. *Evaluation as Feedback and Guide* (Washington: Association for Supervision and Curriculum Development, NEA, 1967).